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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

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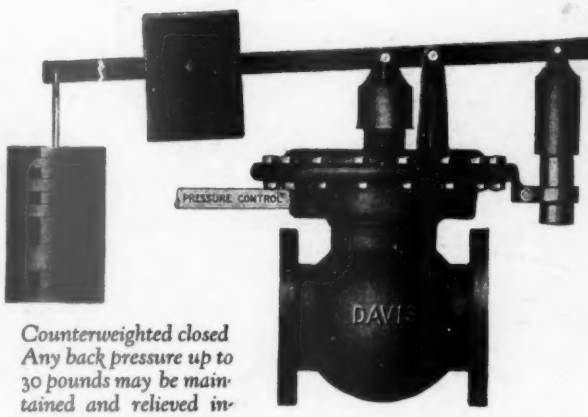

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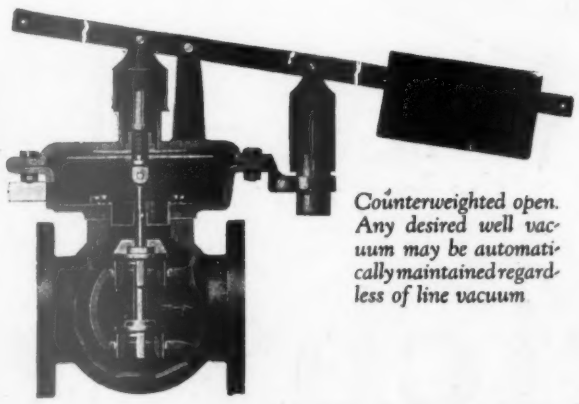

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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

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Crude Oil Production Shows Decrease

Highest daily average estimated production week ended May 30, 1925, 2,347,984 bbls. Lowest in 1925, January 3, 1,911,730 bbls.

Indications Point to Further Increases, However. Drilling Continues Unabated With Promising Results

By Andrew M. Rowley

Highest daily average estimated light oil production in 1925, week ended January 17, 1,525,220 bbls. Lowest in 1925, July 18, 1,374,173 bbls.

By a peculiar coincidence, crude oil production in the United States showed a decline last week, following the trend which developed during the same period last year when a decrease was shown after production had reached a peak of 2,347,984 barrels daily during the week ending May 30. Oklahoma, Louisiana and the Gulf Coast were mainly responsible for the drop in output last week while the Texas Panhandle, which had shown big gains in previous weeks, recorded an increase of only 100 barrels.

The decrease, however, is no criterion of what may happen during the next few months. The Panhandle Field in Texas is expected to reach a peak of 100,000 barrels as there are about 400 tests drilling in that area, while the activity in the Ventura Avenue Field in California forecasts an increase in output there, one estimate being that field will pass the 40,000-barrel mark before August 1, and may reach 50,000 by the end of the summer.

Drilling continues unabated in widely scattered areas of the country and these operations are bearing fruit to encourage operators and stimulate more drilling. In Oklahoma alone there are 767 new leases being tested for oil at this time. Another feature which has been pointed out often but which should be kept in mind is the deeper drilling in old areas. In this connection consider the well just completed in the Bixby district in Oklahoma, one of the oldest producing sections in the State. The new well was drilled to 2,075 feet, which was lower than the other producing horizons in the field, and early this week was flowing more than 3,000 barrels of 52 gravity crude.

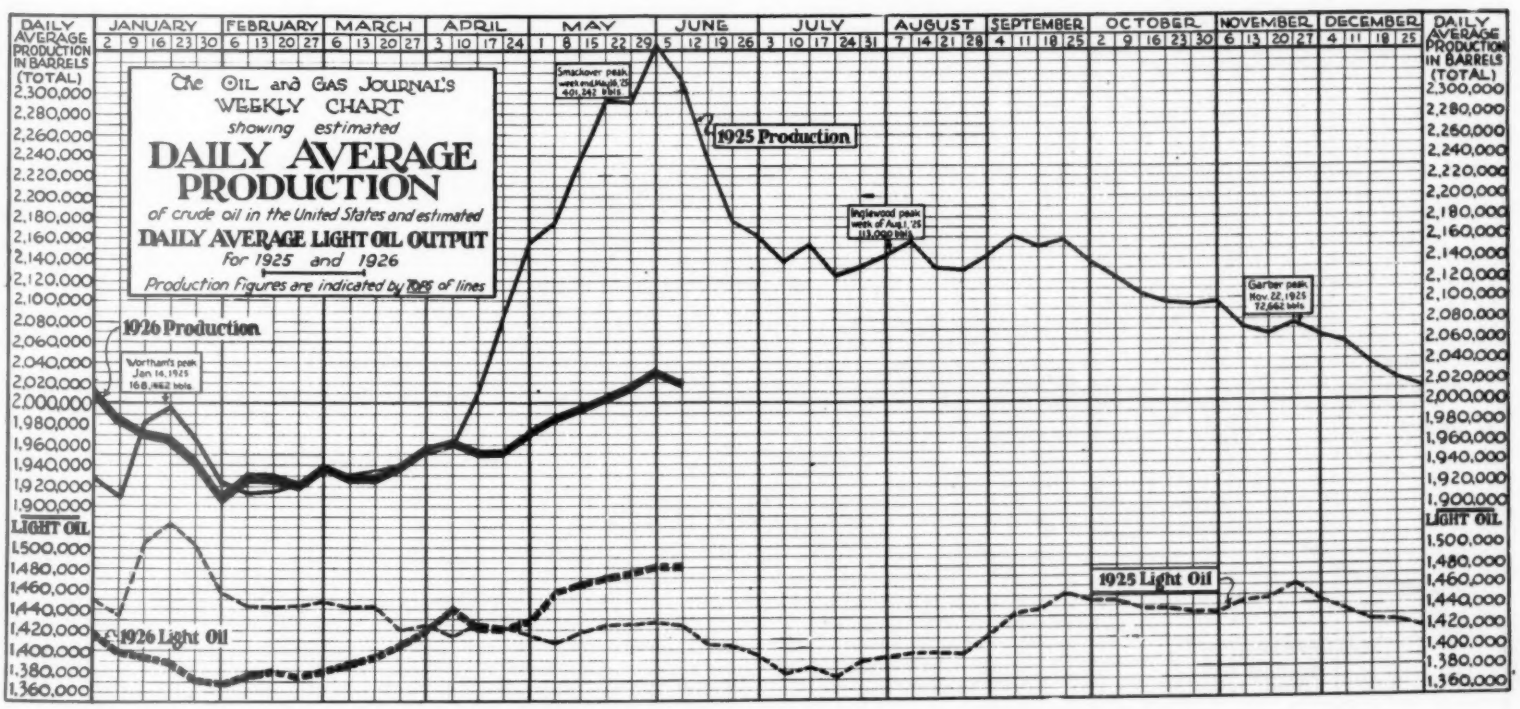
Of especial importance to the general situation is the effort being made to recover a greater quantity of crude from oil sands. The Union Oil Company of California is having considerable success in an extensive program of conservation it is putting into effect and the production of a number of wells has been more than doubled where the plan has been tried. It is believed this conservation movement, which is described in detail in an article beginning on page 29 of this issue, will aid considerably in helping maintain production in California.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for week ended June 5, and a comparison with the previous week follows:

	June 5		May 29	
Oklahoma—	**Light**	**Heavy**	**Light**	**Heavy**
Tonkawa	35,160	.....	36,080	.....
Burbank	44,795	.....	43,215	.....
Other Osage Fields	33,935	.....	33,830	.....
Cushing and Shamrock	21,805	.....	21,735	.....
Bristow and Eastern Bristow	29,720	.....	29,715	.....
Cromwell	17,440	.....	17,725	.....
Garber	35,840	.....	37,615	.....
Blackwell-Braman	18,690	.....	19,710	.....
Davenport	10,660	.....	11,910	.....
Wewoka	28,140	.....	30,670	.....
Northern Miscellaneous	113,475	.....	113,865	.....
Southern Fields	66,275	.....	66,045	.....
Total Oklahoma	455,935	.....	462,115	.....
North Louisiana	45,140	16,295	45,680	19,440
Arkansas—				
Smackover Light	17,105	.....	17,210	.....
Smackover Heavy	.....	132,440	.....	134,205
Miscellaneous	25,605	.....	22,885	.....
Total Arkansas	42,710	132,440	40,095	134,205
North Central Texas	173,408	.....	172,818	.....
Texas Panhandle	38,184	.....	38,084	.....
Powell	29,780	.....	30,700	.....
Mexia, Currie, Richland, etc.	16,000	.....	15,866	.....
Wortham	9,940	.....	9,750	.....
Kansas	107,490	.....	107,980	.....
Total Mid-Continent Area	918,587	148,735	923,088	153,645
Gulf Coast	.....	100,460	.....	106,745
Southwest Texas	.....	37,855	.....	38,022
Eastern	107,250	.....	105,950	.....
Rocky Mountain Area	109,220	.....	105,030	.....
California—				
Santa Fe Springs	49,000	.....	49,000	.....
Long Beach	108,000	.....	109,000	.....
Huntington Beach	45,000	.....	44,000	.....
Torrance	6,000	22,500	6,000	22,500
Dominguez	20,500	.....	21,000	.....
Rosecrans	17,500	.....	17,500	.....
Inglewood	29,000	21,000	29,500	21,000
Ventura Avenue	32,500	.....	32,000	.....
Remainder of State	40,000	210,000	40,000	210,000
Total California	347,500	253,500	348,000	253,500
Total United States	1,482,557	540,550	1,482,068	551,912
Grand Total	2,023,107		2,033,980	

Total Decrease, 10,873 Bbls.; Light Oil Increase, 489 Bbls.



WHAT AND WHERE TO BUY—PAGES 157-158-159

Sluggish Refined Market in Oklahoma

Gasoline Prices Slightly Lower With Greatest Slump in Kerosene and Natural Gasolines. Fuel Oil Demand Slow

By Neil Williams

A decided break in the Oklahoma (Group 3) gasoline and kerosene markets was witnessed the past week. Both products weakened sharply, kerosene falling off from three-quarters of a cent to a cent. The heavier oils, including fuels, gas oil and distillates, in contrast, held better than expected and only concessions reflected the easing up of these grades.

Gasolines suffered most by the reduction of three-quarters of a cent in the export postings at Baton Rouge. Coming as a complete surprise, the slash apparently sapped whatever life had been manifested in the market earlier in the week with the result that the outlook Monday and Tuesday outwardly was as discouraging to refiners as at any other time this year.

Following the export reduction, a more or less panicky tone developed among some refiners when it became evident that some sellers were making an effort to unload and "get out from under" as well as possible. This feeling was not general, however, as many refiners were "sitting tight" although making a few concessions to their established trade.

The sudden action of the Standard Oil Co. of New Jersey and the Standard Oil Co. of Louisiana caught both buyers and sellers unawares. A number of large buyers were reported to have made substantial purchases of gasoline earlier in the week when the market was developing a stronger tone, only to have prices drop later in the week to below their purchase prices.

REFINED MARKET BAROMETER

A break in Mid-Continent gasoline and kerosene was the principal development in refined markets of the country the past week. Except for this, markets were generally unchanged. Gasoline demand was below expectations in all sections but a slight increase was felt in shipments from California. Kerosene was weaker in all areas with a marked drop in prices in the Mid-Continent and Chicago districts. Natural gasolines also were much softer east of the Rocky Mountains due to the lack of demand. An advance of 8½ cents in Diesel oil on the east coast was the only particular change in fuel oils although in other areas, except California they were quiet with price trends downward. A little activity in gas oil was felt in the Mid-Continent but this product was slow in other sections. Lubricants on the whole were more active.

Mid-Continent—Gasoline lower in Oklahoma, Kansas and Texas, weakened by continued slow demand and an uncertain position following a reduction in export postings. A general tankwagon advance in Arkansas and Louisiana strengthened the product in these states. Kerosene prices from three-quarters to a cent lower. Fuel oil and distillates easier but gas oil firmer due to substantial purchases. Lubricants good.

Atlantic Seaboard—Advance of 8½ cents in Diesel oil features eastern markets. Other products generally quiet with gasoline demand below expectations. Kerosene develops tendency toward softness. Lubricants steady except for softness in cylinder and bright stocks.

Pennsylvania—Gasoline stronger with improvement in demand. Fuel oils unchanged. Kerosenes off. Neutrals strong but cylinder stocks weak. Wax improved.

California—Stronger tone manifested but prices unchanged. Gasoline and fuel oil demand increases. Naturals improved.

Chicago—Gasoline demand steady but not as great as had been anticipated. Prices slightly off. Kerosene lower. Distillates steady. Gas oil unsettled. Fuel slack. Lubricant demand good.

Gulf Coast—Unchanged.

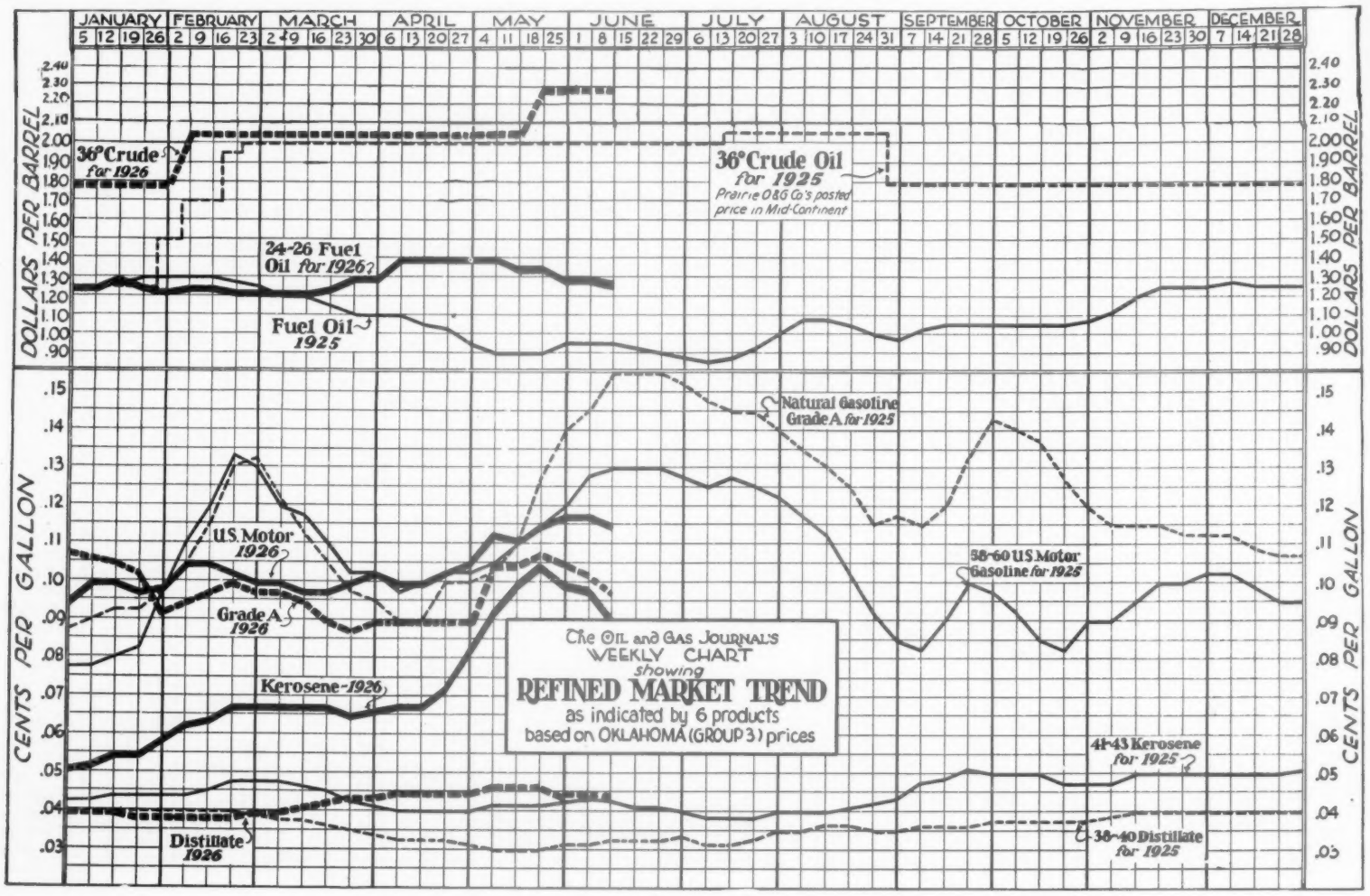
One large export company purchased more than 1,000,000 gallons of 64-66, 375 gasoline from north Texas refiners at 12½ cents the day before the export reduction. Following the cut, the same gasoline was reported available at 12¼ cents. Several jobbers bought up their June requirements of U. S. Motor gasoline earlier in the week. They were reported to have paid 12 cents anticipating rising prices in June. While the average price of gasoline purchased the past few months generally have been in line with market trends, the material purchased the past week is from a quarter to a half cent above present levels.

Part of the weakening in the U. S. Motor gasoline was due to the failure of any substantial demand to materialize during the week as was expected after the reported heavy service station consumption over the previous week-end and Decoration Day. This anticipated demand was responsible to some extent for the show of strength the middle of the week although a few buyers holding this same opinion actually did come into the market for three or four weeks' supply.

A Waiting Market

However, on the whole markets were quiet, and following the export cut, such a feeling of unstableness existed that even jobbers who regularly purchased each Monday hesitated to take on any more gasoline saying they preferred to wait another week. One refiner told of one large jobber, whom he called every Monday morning and had never failed yet to get an order for four or five cars of gasoline. This particular jobber, the refiner said, although he carried large stocks at all times, always was in a position to take on a little more gasoline whenever called by the refiner. This last Monday, however, he told the refiner that considering the market and uncertain condition he would have to wait.

(Continued on Page 131)


JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
DOLLARS PER BARREL
36° Crude for 1926
24-26 Fuel Oil for 1926
Fuel Oil 1925
36° Crude Oil for 1925
Prairie O&G Co's posted price in Mid-Continent
CENTS PER GALLON
U.S. Motor 1926
Grade A 1926
Kerosene-1926
Distillate 1926
Natural Gasoline Grade A for 1925
38-60 U.S. Motor Gasoline for 1925
41-43 Kerosene for 1925
38-40 Distillate for 1925
The Oil and Gas Journal's WEEKLY CHART showing REFINED MARKET TREND as indicated by 6 products based on OKLAHOMA (GROUP 3) prices

Union Uses Dry Gas to Aid Production

Extensive Conservation Program in California Already Has Increased Recovery of Crude and Natural Gasoline

By L. P. Stockman

LOS ANGELES, Calif., June 5.—The Union Oil Co. of California is working on what is perhaps the most comprehensive, extensive and ambitious conservation program ever undertaken and if the company meets with the success which it anticipates through a better utilization of the Marietta or Smith-Dunn process of stimulating crude oil production it will undoubtedly lead the way by installing additional equipment and enlarging that already under construction.

Before commenting on the Union's present and anticipated work it might not be amiss to call attention to the fact that operators have been endeavoring for the past 15 years or more to perfect a method of increasing the amount of recoverable oil and, since a large percentage of oil remains in the sand after the wells have been completely exhausted in oil fields where the productive horizons consist of sand or sandstones, and work along this line is of considerable interest and importance. Geologists and technologists differ as to the amount of oil left in the ground but the majority agre that from 60 to 80 per cent is unrecoverable under present methods of production.

Water treating plant on Union Oil Co.'s Stearns lease at Fullerton which will form a part of the company's conservation plant. Note the settling pipes and smaller equipment being put in place.

Successful Methods

Flooding, air or gas pressure and dewatering of depleted fields have all been used successfully in the past but their use has been somewhat limited and the amount of oil produced by either or a combination of any of these methods has been comparatively small. The recovery of oil by flooding, which has been practiced in a limited way for a number of years, consists of pumping water into a central well around which are located a number of oil wells or the more recent method of utilizing an entire row of wells as receivers, the water from which increases production from those on both sides. The two methods are quite similar and, while it is applicable in some areas, it is doubtful if it will come into any general use in California because of the varied interests and cost involved. The compressed air or gas method, known as the Marietta or Smith-Dunn process and which dates back as far as 1911, consists in the introduction of air or gas into the producing formation by means of compressors the oil flowing or being pumped out of nearby wells.

Preliminary Tests Gratifying

The Union has been experimenting for the past several years on the possibility of increasing the ultimate recovery by utilizing gas and the success which attended its efforts has resulted in the starting of several plants, two of which have just been given their preliminary run with gratifying results. The company has two more plants under construction and unless some unforeseen delay arises they should all be in operation within the next several months. The preliminary work and experiments were conducted by R. R. Templeton, under the supervision of Frank Hill, manager field operations.

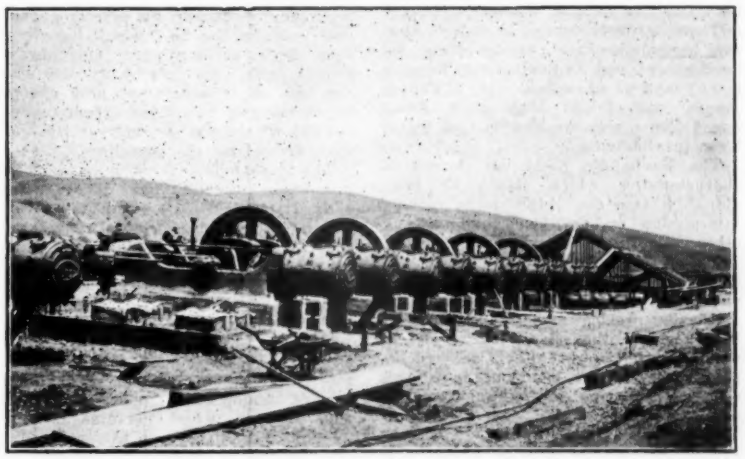
The first recovery unit to be placed in operation was that at Richfield, although no official information is available, reports from the field indicate that the plant is kicking them over in fine style. This set up, which consists of 19 boilers side by side, a similar number of compressors all housed, together with other equipment and appurtenances, was given its initial tryout during the latter part of last week and that the test was highly satisfactory is evidenced by the fact that one well increased from 230 bbls. daily to 560 bbls., while another picked up from 120 bbls. to 250 bbls., a gain of over 100 per cent in each case. This jump took place during the first 24 hours and it is believed that continued application over a long period with the pressure built up gradually under skilled technical direction will result in a much larger increase in well production and total recovery of oil. No figures are available as to the operating cost and the company's hesitancy in giving out information of any kind indicates that none can be expected for several months, or at least until the several plants have been in operation for some time.

These two marine engines were once part of a freighter but are now part of the Union Oil Co.'s conservation plant at Fullerton.

Works on Dry Natural Gas

It is understood that the company is working on dry natural gas at present but it is quite possible that refinery oil gas will be utilized at a later stage if practicable. The Standard Oil Co. conducted a series of tests along this line a year or two ago using a southern California crude oil testing 25.8 degrees. The company's technicians found as a result of the experiment that the solubility of natural gas was 44.5 per cent by volume, while refinery oil gas registered 67.5 per cent. This is of particular importance as the casinghead extraction in connection with the conservation and recovery units will prove no small matter.

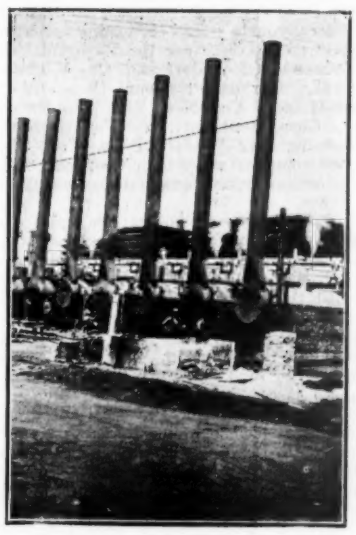
It has been proven conclusively that dry natural gas when introduced into a producing horizon returns in a saturated condition and this phase of the matter will undoubtedly come in for a considerable amount of research work during the next year or two because of its effect upon the natural gas manufacturing industry in general, for it is bound to result in increased production of natural gas gasoline. The Union will have some very valuable data compiled within the next year covering the installation and operating costs and the result of the work done during this period.



Cooper gas engines being installed on the Stearns lease of the Union Oil Co. at Fullerton. There are four more units in addition to those shown, part of which will be used to force dry gas down into the oil sand and the balance to extract casinghead from the wet gas when it is returned.

Installing Big Plant

On the Stearns lease at Fullerton, the Union is constructing a most formidable array of equipment and, while this plant will not be ready for use for several months it is rapidly taking shape. A series of nine Cooper gas engines, a water treater and cooler, two marine steam engines, which it is reported were salvaged from two of the government old wooden ships constructed during the war, together with condensers, traps and tanks, makes this plant one of the most interesting and complex under construction. As will be the case at Richfield, the company will force dry gas down into former producers instead of drilling new key wells, although, of course, Nos. 57, 66, 67 and 68 on the Stearns lease, now drilling, will be hooked up upon completion and may be used exclusively as gas receivers later on.



Seven of the Union Oil Co.'s nineteen boilers at Richfield.

Big Boost in Production

The company's units on the Brooks lease at Huntington Beach, consisting of nine boilers, compressors and other necessary equipment, has just gone into operation and the first well treated changed from a 130-bbl. pumper to a flownig well doing 610 bbls. daily. The method which resulted in increased well production at Richfield and Huntington Beach consists of introducing dry gas into the well between the oil string and tubing, part of the gas going into the formation and some returning through the tubing with the increased flow of oil. The output is run through a trap and the gas, after yielding its casinghead content in the absorption plant, is again forced down into the well for another round trip. This principal is not new by any means as it has been used for a long time on a smaller scale. The real secret in connection with the Union's conservation work lies in the location of wells treated, pressure maintained and mechanical condition of the holes used. When key wells are used, as will be the case at Dominguez, the gas is forced down the receiving hole and emerges at some other point. This type of treatment is for use in fields where a company controls the majority of the productive acreage and the installation of this equipment will not result in increased production of wells on adjoining property. Individual treatment of wells is more satisfactory in fields where the leases are held by various interests as application of the conservation principle on a few wells does not result in a corresponding gain in the production of producers on adjoining property.

Location of Plants

There will be two conservation plants, or recovery units as they might well be termed, in the Dominguez Field, one on the Hellman lease and another on the Reyes lease. The Union has started erecting and will operate the former,

(Continued on Page 132)

Panhandle Peak at Least 100,000 Bbls.

Water Encroachment Not Serious. Million Dollars Worth of Equipment Moving Into the Field Every Week

By J. L. Dwyer
Staff Correspondent

AMARILLO, Tex., June 7.—"And now that you've seen it, what do you think of it?" asked an executive of one of the oil companies after the writer had spent two days in the Panhandle country. "Think of what, the field or the boom?" was our reply.

One must distinguish between the oil field and the frenzy of excitement which is at present sweeping the vicinity of Amarillo. The field is called the Panhandle. The excitement might well be termed "Panha-mania."

There is every reason to believe that the Panhandle Field will continue its development, and its productivity is purely a matter of speculation. "Panhamania" will follow Mah Jong, Louis Angel Firpo, and the Florida real estate boom into oblivion.

The Panhandle Field has dozens of characteristics which stamp its individuality. One can obtain more varying information on the field than in any other region in the oil country.

Those who would exalt human wisdom, and acclaim the infallibility of modern science are confronted with the perplexing problem of hearing men widely known in the oil fields; geologists, scouts, land men, and others selected because of their pre-eminence in knowledge of petroleum production voice the opinions that:

1. (a) The Texas Panhandle will be prolific beyond the dreams of the discoverers.

(b) The Texas Panhandle will be the most tragic failure in industrial history.

2. (a) The Panhandle will produce 12,000 bbls. to the acre.

(b) The Panhandle will do well to produce 2,500 bbls. to the acre.

3. (a) The water encroachment marks the beginning of the end of the Panhandle.

(b) The water encroachment is unimportant.

4. (a) The development of the Panhandle has only begun.

(b) The Panhandle will be a matter of history and memories before Christmas.

5. (a) The field is underrated and is actually producing more than recorded.

(b) The field is overrated and the production of many wells is inflated.

And so on down the line. The whole attempt to analyze the field might well be termed "The futility of facts, or the battleground of belief."

Certainly An Unusual Field

The astounding divergence of opinion is in a sense merely reflective of the varying conditions which one encounters in the field. On one side of the field, one finds a well four years old still producing 40 bbls. daily by the swab, and using its own gas for boiler fuel to swab the production. Close by, one finds a company with eight wells producing 132 bbls.

One finds these conditions in the field, because the Panhandle is certainly the most unusual oil field which has been uncovered to date. It is the one place where the inevitable never happens, and the impossible always occurs.

Since there have been so many and such various opinions forecast about the future of the field, surely a few expressions will not be amiss. After an extensive observation and an attempt to study the field, the following salient facts about the Texas Panhandle would seem to be well founded:

1. The water encroachment is not serious.

2. The Panhandle will have a peak production of at least 100,000 bbls. daily.

3. Unless different formations; a thickening up of the present breaks in the lime; or a greater saturation be encountered, the ultimate production recovered will be small, certainly not more than 7,000 bbls. per acre.

Water From Heavy Shooting

The water encroachment has been definitely ascertained to be the result of heavy shooting. The only wells in the field which are making any appreciable amount of water are the wells which have been heavily shot. In the case of at least two wells in the field which have been shot with extraordinary amounts of nitroglycerin, the offsets (which have not been shot) have never been affected by water, and today finds them producing oil within the 2 per cent b.s. content allowed by the pipe lines.

The Panhandle can hardly have a peak production of less than 100,000 bbls. daily. Its present daily output is approximately 38,000 bbls. (conservatively estimated), and there are over 400 drilling wells and rigs in the field. The completion of these wells will offset the decline, and also cause the peak to pass the 100,000-bbl. mark.

The matter of ultimate recovery per acre depends upon saturation, and in this respect there is the greatest difference of opinion of any phase of the field. The dolomite, which contains the production, has an average thickness of 80 feet throughout the field. In contains two and in some cases three breaks averaging 3 feet in thickness. The majority are inclined to favor the opinion that the best production is confined solely to the breaks in the lime, and that the remainder of the lime is not saturated. With this limited amount of saturated strata, a large recovery cannot be expected.

Field Covers Big Area

For the benefit of the readers who have not familiarized themselves with this vast field, a few words of general description would serve as an introduction. The most active and prolific part of the Texas Panhandle oil field is located in Hutchinson and Carson Counties, in the extreme northwest corner of the State. This field might be said to be a development of the old gas field discovered seven years ago near Amarillo. The present field is approximately 60 miles northeast of Amarillo. Oil production is found in a dolomite or lime formation at a depth slightly less than 3,000 feet. While there is outlying production in Gray, Wheeler and Potter Counties, the present activity is encountered in an area running 15 miles north and south, and an equal distance east and west. This in itself is a truly marvelous area, and assumes real magnitude when one considers that only two dry holes have been drilled, and both of them are on the extreme edge of the area outlined. As this is written, there is another well which looks very disappointing and may be doomed for failure. It is also on the east side of the pool.

As shown in The Oil and Gas Journal's map of the Panhandle published March 18, the production is divided into two groups; the dolomite, and the granite wash. The dolomite is found in Hutchinson County, and constitutes the bulk of production in the field. The granite wash is found in the north end of Carson County, and its results have been uniformly light; the average initial production of completed wells in that area being about 18 bbls. The granite wash is found immediately beneath the lime. The country intervening between the granite wash and dolomite fields is composed of about 5 miles, which is unfavorably considered. It is known as the "tight lime country" and owing to its character, there is little room for production in such a highly solidified stratum.

The dolomite or lime formation is level bedded with sea level. There have been no dry holes drilled on the known regional high where lines have been contoured above 700 feet. There is a very low static head of water found in all parts of the field. Even in unfavorable conditions, water raises only 1,800 feet in the holes when found in the syncline. The rock pressure on all gas wells in the region is uniformly 400 pounds.

Two Sections Best Area

The best production in the field is confined to about two sections in Hutchinson County. While there is apparently a very slight chance of a dry hole in any part of the field outlined above, there is also the attendant risk of getting a small well which will require a long time to pay for the investment. A comparison of figures in this respect is very interesting. The field has a splendid average production per well. The past week saw the 100 oil wells in Hutchinson County produce an average of 35,000 bbls. per day. An average of 350 bbls. per day per well; and yet 10 wells are producing 40 per cent of the total production; quite a different angle to the story. This apparently emphasizes the importance of lime conditions, and makes it apparent that lime conditions are of greater importance than structural conditions in this field. There are evidently some rich spots in the pool which will yield substantial production, and there must necessarily be a great number of stripper wells in the area.

Amarillo a Good City

From an inspection of the region, it is apparent at this time that four companies are in a splendid position to benefit from the field, and in view of the light production of so many wells, there is a serious question as to whether or not the field as a whole will possess any degree of economic stability. There is only one unfavorable aspect of Amarillo and that is the promoters encountered there, formerly well known for their activities in the Mexia and Smackover Fields, and yet the city has so many other splendid qualifications for growth, and one meets such unfailing courtesy on every hand that this issue is dwarfed in comparison. The Texas Railroad Commission, which has supervision of public utilities and also controls the corporations of the State, is exercising great vigilance in limiting the activities of the promoters who have preyed upon a gullible public in the past, and the majority of the small companies and syndicates operating in this field are honorably conducted, and most of them have made money for their stockholders. That the questionable promoters will be made extremely uncomfortable and their activities curtailed to a minimum is a consummation to be devoutly wished.

The field is one vast reunion of cable tool contractors and workers; the first

(Continued on Page 135)

GULF REFINING CO. SUES COMPANIES OPERATING DUBBS CRACKING PROCESS

Several refinery organizations located in different parts of the country were made defendants in suits filed by the Gulf Refining Co. in which it is alleged that the defendant companies are using processes in their refinery operation in violation of the patent rights of the defendants.

All suits filed are against companies operating the Dubbs cracking process, certain features of which are alleged to be covered by the Gulf patents. The companies so far named in the suits filed in Federal courts where the companies have their main offices are the Pure Oil Co., Columbus, Ohio; Derby Oil Co., Wichita, Kans.; Roxana Petroleum Corp., Warner-Quinlan Co., New York, Prudential Oil Corp., Baltimore, and the American Refining Co., Wichita Falls, Tex. The Gulf company seeks both temporary and permanent injunctions and accounting of profits.

There are several other companies operating the Dubbs cracking process. It is understood that the plaintiff company, however, will not file additional suits until the present suits have been tried. The Universal Oil Products Co. of Chicago, owners of the Dubbs process, have assured the licensees of their process that they will take care of defense in these cases. The Gulf suit has been expected ever since the Universal Oil Products Co. filed suit in January against the Gulf Refining Co., in which it was alleged that the Gulf company in the operation of its cracking process was infringing on the patent rights of the Universal. The action against the Gulf company was one of several suits filed by the Universal company several months ago in which practically all of the owners of the principal cracking suits are involved as defendants for the alleged infringement of Universal patents.

Those who have made a study of the patent situation covering the operation of cracking processes agree that important issues are involved in the Universal and Gulf suits. In its suit the Gulf Refining Co. alleges that four of its patents are infringed in the operation of the Dubbs process.

These patents were issued to Raymond F. Bacon, Clinton W. Clark and Benjamin T. Brooks and assigned to the Gulf Refining Co. Most of these patents were applied for and issued previous to those on which the Universal versus Gulf suit are based. These four patnets cover the main features of the Gulf process, which has been in operation for several years. This process belongs to what is generally termed the "tube and tank type" to which class the Dubbs belongs as do all the principal processes in use at the present time. The McAfee process, which belongs to the catalytic type, is not involved in the Universal and Gulf litigation.

The first of the Gulf patents which are alleged to be infringed by the Dubbs operation is No. 1,101,482, and was applied for on May 6, 1912, and issued June 24, 1913. The second is No. 1,131,309, which was applied for on May 2, 1913, and issued March 9, 1915. The third patent is No. 1,334,731, applied for May 2, 1913, and issued March 23, 1920, and the fourth patent is No. 1,439,683, which was issued December 6, 1922.

Comparing these patents with some

(Continued on Page 135)

Substantial Increase in Crude Runs

Mid-Continent Refiners Boost Plant Operations More Than 25,000 Bbls. Daily. Greatest Increase in Oklahoma and Kansas

By Neil Williams

Although crude prices were higher, runs to stills of Mid-Continent refineries were substantially greater June 1 than on the same day of the previous month. The Oil and Gas Journal's monthly review of refinery operations showed a gain of 25,170 bbls.

The total throughput in the Mid-Continent June 1, as indicated in the check, was 416,525 bbls. as against 391,355 bbls. on May 1. This represented an increase of slightly less than 6 per cent. The increase is of added significance because of a similar boost the previous month, which meant a gain of 48,215 bbls. in daily runs the last two month. In addition to this, 3,000 bbls. more has been added in daily runs since the report was compiled.

The increase in runs at this time is causing considerable comment among market students because of the admitted overproduction and the large stocks of gasoline the past few months.

Crude advances ordinarily tend to have a depressive rather than a stimulative effect on the throughput. However, the last advance in which all grades of Mid-Continent crude were increased 25 cents a barrel on May 15 and 17, came at a time when refiners were entering their season of heaviest gasoline demand and pace with the increased operations and naturally were expanding operations in anticipation of a record-breaking consumption this summer.

So far demand outwardly has not kept pace with the increased operations and virtually all refined products are easy with price trends downward. The acute scarcity of kerosene and fuel oils during April and the early part of May also has been alleviated by the increased runs although a noticeable falling off in demand is to be considered in these products.

MID-CONTINENT REFINERY OPERATIONS

Table No. 1

(Based on plants June 1, 1926, and May 1, 1926)

	*Number Plants June 1	Crude Capacity	Crack'g Capacity	Plants Oper'g June 1	Daily Crude Runs June 1	Plants Oper'g May 1	Daily Crude Runs May 1	Daily Increase June 1
Oklahoma	56	272,600	93,550	49	182,875	48	172,445	10,430
North Central Texas	41	167,250	49,450	33	87,525	32	82,155	5,370
†Kansas	22	130,700	59,600	18	93,250	18	78,300	14,950
North Louisiana	7	41,500	7,500	6	32,750	5	37,800	‡5,050
Arkansas	9	31,000	12,660	9	20,125	9	20,655	‡530
Total	135	643,050	222,700	115	416,525	112	391,355	25,170

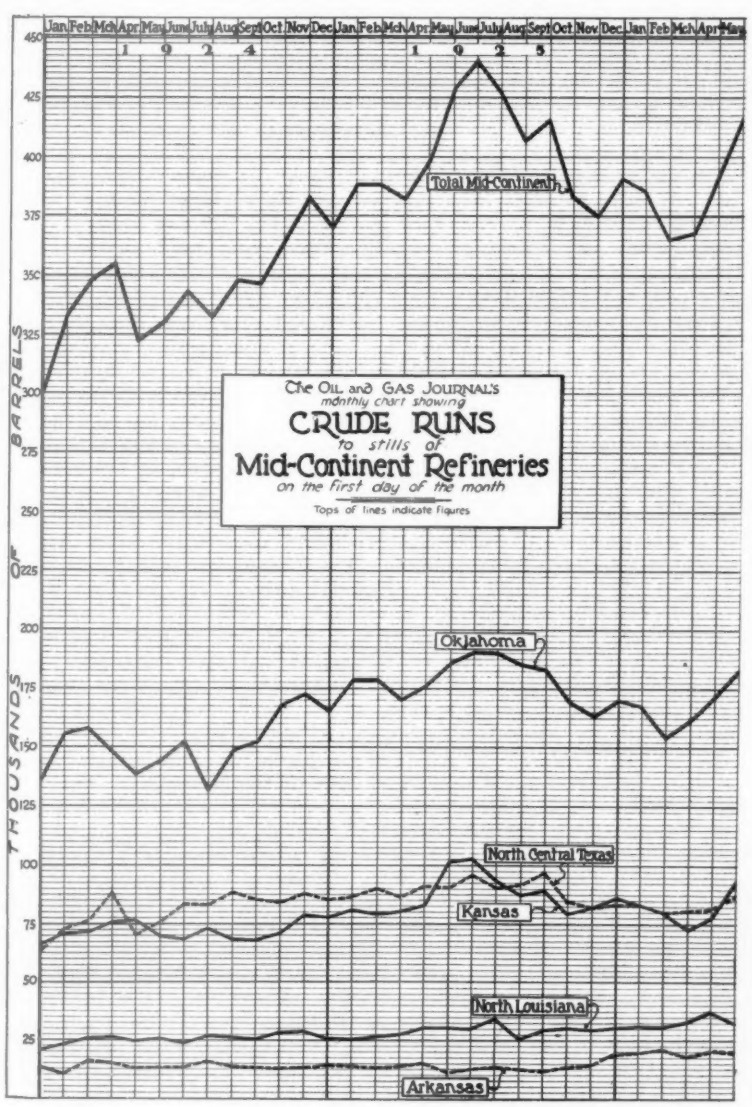
*Does not include plants which have been shut down one year or longer.
†Includes one Missouri plant.
‡Decrease.

Table No. 2

(Based on plants June 1, 1926, and June 1, 1925)

	*Number Plants June 1, 1925	Crude Capacity June 1, 1925	Plants Oper'g June 1, 1925	Dy. Crude Runs June 1, '25	Daily Decrease June 1, 1926
Oklahoma	59	269,600	54	185,675	2,800
North Central Texas	47	170,550	38	90,375	2,850
†Kansas	25	119,400	20	100,250	7,000
North Louisiana	7	37,300	6	30,400	‡2,350
Arkansas	14	35,000	8	17,250	‡2,875
Total	152	632,350	126	423,950	7,425

*Does not include plants which have been shut down one year or longer.
†Includes three Missouri plants.
‡Increase.



Less Than Last Year

Although a large increase was made in runs on June 1, the total throughput was not as great as a year ago, lacking 7,425 bbls. Nor was the increase as great this year, as Mid-Continent refiners on June 1, 1925, put 423,950 bbls. through their stills, a boost of more than 25,000 bbls. over June 1, 1925.

This comparison with a year ago loses its significance from the standpoint of gasoline output when it is remembered that the development of cracking and the increased yields of gasoline more than offset the 7,000-bbl. difference in runs. The increase last year came following a heavy demand for gasoline by export buyers when refiners were pushed to fill their orders.

It was during the latter part of June and the early part of July last year that Mid-Continent refiners broke all records in maximum refinery operations when on July 1 they were running 440,350 bbls. daily. It is for this reason that refinery operations will be watched closely this month as market trends the remainder of this summer may hinge somewhat on the amount of crude runs until July.

Considering the present sluggishness of refined products and the higher prices for crude, it is not likely that crude runs will attain the peak set by operations on July 1 a year ago. If last year's mark is equalled, daily runs will have to be increased 23,825 bbls. by the end of the month.

The importance which the increase in runs has on the general crude situation is of particular significance at this time as there is considerable speculation of another advance in the near future. Some light on this is given in the fact that Mid-Continent refiners now are demanding a greater percentage of the crude production than they did just before the last crude raise the midd'e of May.

What influence this will have on a general crude change remains to be seen. But, with the majority of large crude transporters drawing from storage to meet the demand for oil, and with Mid-Continent refiners taking 38.6 per cent of the daily crude production in comparison with only 37.9 per cent of a month ago, the trend can be seen clearly.

These percentages are based on crude production figures compiled by The Oil and Gas Journal. On June 1, the daily production totaled 1,076,733 bbls. This was an increase in production over May 1 but in face of this refiners consumed a greater percentage than on May 1, thus leaving less oil to be shipped out of the Mid-Continent and to the eastern and Gulf Coast refineries.

Oklahoma-Kansas

Oklahoma and Kansas refineries accounted for the bulk of the increase in Mid-Continent runs the past month, plants of the former state showing a gain of 10,430 bbls. and those of the latter state 14,950 feet. Arkansas and north Louisiana were the only states in which runs were reduced.

One of the most important changes in Oklahoma was that of the Marland Refining Co., which increased its daily runs 4,000 bbls. during the month. However, a general trend toward increased operations was reflected with 16 plants reported gains and only 8 plants reductions.

In addition to this, the plant owned by the Oil State Refining Co. at Enid resumed operations two weeks ago. The plant has been leased to the Bolene Refining Co. in order that the latter company might dispose of some surplus crude.

The plant of the former Nyanza Refining Co. at Wilson also has been started up under the ownership of the Oklahoma Asphalt Co., which recently leased the equipment. The Oklahoma Asphalt Co. is making extensive improvements to manufacture asphalt and road oils from Healdton heavy crude and as soon as the new installations are completed will increase runs from 750 to 1,000 bbls.

Among other Oklahoma plants to make material advances in crude runs were the Producers & Refiners Corp. at West Tulsa and the Tidal Refining Co. at Drumright. The Tidal recently completed an extensive improvement program at its plant and the increase in runs was only in line with this development. The advance at the Producers and Refiners plant put operations

(Continued on Page 88)

REFINING OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs June 1	Runs May 1
Anderson-Pritchard, Cyril	1,500	1,000	1,300
Barnsdall Refineries, Inc., Barnsdall	5,000	4,000	3,800
Barnsdall Refineries, Inc. (Waite Phillips), Okmulgee	6,000	4,000	4,000
Bell Oil & Gas Co., Grandfield	3,000	1,500	1,500
Bolene Refining Co., Enid	5,000	3,600	3,400
Cameron Refining Co., Ardmore	3,000	3,000	3,000
Canfield Refining Co., Yale	500	150	150
Champlin Refining Co., Enid	16,000	13,000	12,000
Coleman-Nelson Corp., West Tulsa	2,000	Shut down	Shut down
Continental Oil Co., Sapulpa	7,000	1,500	1,500
Cushing Refining & Gasoline Co., Blackwell	1,500	1,200	1,200
Cushing Refining & Gasoline Co., Cushing	2,500	1,000	1,500
Empire Refineries, Inc., Cushing	7,000	5,000	5,000
Empire Refineries, Inc., Okmulgee	3,000	3,000	3,000
Empire Refineries, Inc., Ponca City	6,500	6,000	6,000
Garber Refining Co. (Omar)	3,000	2,350	2,100
Gilmer Oil Co., Ringling	1,500	1,100	1,060
Globe Oil & Refining Co., Blackwell	5,000	5,000	4,700
Hewitt Refining Co., Hewitt	1,500	700	725
Illinois Oil Co., Cushing	3,000	2,000	2,000
Imperial Refining Co., Ardmore	6,000	3,575	3,950

(Continued on Page 76)

Estimates Vary on Lakota Sand Output

Midwest Experts Place it at 72,000,000 Bbls., While Representative of Another Company Fixes it at 30,300,000

By James McIntyre

How much oil will the Lakota sand in the Salt Creek, Wyoming, Field produce?

This question is of interest to every company and individual engaged in the production of oil. It has a bearing on the future of the petroleum industry, just as the question of the probable production of the known deeper sands in California and in Oklahoma and the recently opened fields in the Texas Panhandle and other parts of the Mid-Continent, now in verious stages of development, have a bearing on the crude situation of the future.

Whenever we ask where is our future production to come from, one of the first known sand horizons to suggest itself is the Lakota sand of Wyoming. It cannot be overlooked. It is one of the big storehouses of oil. Its ultimate production is subject to much discussion. The Midwest Refining Co., which opened the Lakota sand to production and controls the entire known Lakota sand producing territory, is said to estimate it at 72,000,000 bbls. Other estimates made by outside companies do not credit the sand with nearly so large an ultimate output. It will perhaps be not so much a question of good judgment as good guessing. That has been the experience in other fields where estimates were made on the ultimate recovery of fields in the beginning of their development.

Potential Producer

There is no question about the Lakota sands being a big potential producer. It has been penetrated either in part or in its entire thickness by no less than 40 tests. It is even believed to have been defined by some very capable observers who have studied the results of the drilling operations in that horizon. Some notably large wells have been opened and permitted to flow long enough, at least, to get a full 24-hour gauge on them, and there have been other wells which have indicated that the production from the Lakota may be expected to be erratic, and that the results in one well tell nothing of what may be expected of the three offset wells.

The Midwest Refining Co. controls the entire known Lakota sand area in the Salt Creek Field. That it expects much of it is indicated by its estimate of a probable total recovery of 72,000,000 bbls. of oil and its estimate that the Lakota producing area will cover 2,500 acres.

The writer recently saw a report on the Lakota sand area made by the representative of a large Mid-Continent company, which, while it made no attempt to estimate the ultimate production, conceded the Midwest company from 1,800 to 2,000 acres of producing territory and conceded only half of that acreage in the Sundance producing zone which lies below the Lakota, and which is known to produce oil and which may produce a vast quantity of it.

The Oil and Gas Journal has been privileged to see still another survey made on the Lakota sand by the representative of another large Mid-Continent organization and the field representative—who, by the way, is a very capable oil man—can see only 1,680 acres of Lakota sand producing territory, and estimates that the Lakota sand will produce 30,300,000 bbls. of oil. He estimates the inside acreage at 20,000 bbls. per acre and the edge acreage at 10,000 bbls. per acre. The Sundance sand, he believes, will perhaps cover as much territory as the Lakota sand, but he does not attempt to estimate its production because there is so little data upon which to figure.

The facts that follow are taken from this survey. Whether time will show that this observer is right or wrong, his findings are interesting.

Even his very conservative estimate of ultimate production of the Lakota sand concedes it enough to make it one of the big undeveloped oil zones of the United States, and below it is another zone that promises big things.

All the production in the Lakota is shut in. It will not be opened until the Midwest Refining Co. needs the oil in its refining operations. Other wells are being drilled to the Lakota and these, too, will be shut in.

The following tables give details of results thus far in the Lakota and Sundance sands in the Salt Creek Field:

LAKOTA SAND DEVELOPMENT, SALT CREEK FIELD, WYOMING, MAY 1, 1926

Failures in Lakota Sand, Edge Wells

Well No.	S	T	R	Location	Sands		Thickness of Sand Feet	Total Depth Feet	Initial Prod., Bbls.
14AX	15	40	79	CNL SE SE	Lakota	3,114-3,140	26	3,195	Water.
34X	23	40	79	SWC SE NW	Lakota	2,504-2,553	49	.....	Water.
					2nd Sundance	2,896-2,965	...	.....	55 bbls. oil per day;
					3rd Sundance	3,066-3,075	...	3,075	water in top 9 ft.
33L	23	40	79	SEC SW NE	Lakota	2,461-2,498	37	.....	252 bbls. oil, 468 bbls. water.
7L	24	40	79	CWL NW SE	Lakota	2,568-2,643	75	2,643	Oil and hot water; 275 bbls. oil, 1,025 bbls. water.
12L	25	40	79	CEL NE SW	Lakota	2,523-2,552	29	.....	Water.
					Morrison	2,690-2,705	...	.....	Water.
					Sundance	2,960-3,005	...	.....	Water.
					Embar	4,070-4,120	..	.....	Water.
					Tensleep	4,300-4,400	...	4,400	29,000 bbls. water a day from all sands.
21L	35	40	79	NEC SW SE	Lakota	2,575-2,618	43	.....	100 bbls. fluid 95% water.
21L	2	39	79	NEC SW NW	Lakota	2,581-2,650	69	.....	Oil; 75% water.
4L	2	39	79	NEC NW SW	Lakota	2,651-2,783	132	.....	Water and oil.
					Morrison	2,864-2,865	...	.....	Show of oil.
					Sundance	3,093-3,118	...	3,229	Dry.
19L	23	40	79	NWC SW SW	Lakota	2,508-2,529	8	.....	Oil and water.

Producing Wells in Lakota Sand
(Shut in.)

3L	23	40	79	NWC NE SE	Lakota	2,420-2,497	77	.....	4,556 bbls. oil.
13L	23	40	79	SEC NE SE	Lakota	2,422-2,484	62	.....	8,000 bbls. oil.
19L	24	40	79	NWC SW SW	Lakota	2,432-2,476	44	.....	4,556 bbls. oil.
3L	26	40	79	NWC NE NW	Lakota	2,449-2,498	49	2,511	127 bbls. oil.
4L	26	40	79	NEC NW NW	Lakota	2,453-2,502	49	2,519	No test made.
6L	26	40	79	NWC NW SE	Lakota	2,434-2,486*	52	.....	2,894 bbls. clean oil.
31L	26	40	79	SWC SW SE	Lakota	2,349-2,415	66	2,486	2,000 bbls. oil.
24L	34	40	79	NEC SE NE	Lakota	2,384-2,432	48	2,436	1,905 bbls. oil.
13L	34	40	79	SEC NE SE	Lakota	2,356-2,398	42	.....	2,210 bbls. oil.
6L	35	40	79	NWC NW NE	Lakota	2,244-2,372	128	2,402	534 bbls. oil.
19L	35	40	79	NWC SW NW	Lakota	2,326-2,369	43	2,374	2,167 bbls. oil.
33L	35	40	79	SEC SW NW	Lakota	2,268-2,370	102	.....	3,250 bbls. oil.
34X	35	40	79	SWC SE NW	Lakota	Unknown	...	.....	Sd. mudded, no test.
					Morrison	2,430-2,460	...	.....	75 bbls. oil.
					2nd Sundance	2,506-2,528	...	.....	Dry.
					3rd Sundance	2,828-2,870	...	.....	6,388 bbls. oil.
6L	36	40	79	NWC NW NW	Lakota	2,485-2,500	15	2,525	237 bbls. oil.
16L	2	39	79	SEC NW NW	Lakota	2,522-2,539	17	.....	1,338 bbls. oil.

*At 10 feet in the sand this well showed water.

Producing Wells in Lakota Sand But Not Completed
(Shut down on top of the sand or a few feet in sand.)

13L	23	40	79	SEC NE SW	Lakota	2,496-2,499	3	2,508	950 bbls. oil.
33L	23	40	79	SEC SW SW	Lakota	2,432-2,440	8	.....	150 bbls. oil.
34L	23	40	79	SWC SE SW	Lakota	2,432-2,433	1	.....	160 bbls. oil.
6L	23	40	79	NWC NW SE	Lakota	2,444	...	.....	S.D. top of sand; no test.
19L	23	40	79	NWC SW SE	Lakota	2,458-2,460	2	.....	2,462 bbls. oil.
33L	24	40	79	SWC SW SW	Lakota	2,427-2,435	8	.....	826 bbls. oil.
31L	25	40	79	SWC SW SW	Lakota	2,467-2,482	15	2,486	173 bbls. oil.
31L	26	40	79	SWC SW NE	Lakota	2,377-2,385	8	2,511	No test.
31L	26	40	79	SWC SW NW	Lakota	2,485	...	.....	S.D. top of sand, 273 bbls. oil.
36L	26	40	79	SEC SE NW	Lakota	2,367	...	.....	S.D. top of sand, 105 bbls. oil.
36L	26	40	79	SEC SE SW	Lakota	2,430-2,440	10	.....	471 bbls. oil.
24L	34	40	79	NEC SE SE	Lakota	2,491	...	.....	S.D. top sand, 1,950 bbls. oil.
1L	35	40	79	NEC NE NE	Lakota	2,447-2,455	8	2,459	215 bbls. oil.
1L	35	40	79	NEC NE NW	Lakota	2,390	...	.....	S.D. top sand, 3,207 bbls. oil.
4L	35	40	79	NEC NW SW	Lakota	2,297-2,310	13	.....	60 bbls. oil.
15L	2	39	79	SWC NE NW	Lakota	2,532	...	.....	S.D. top sand, 6,500 bbls. oil.

Drilling Wells Whose Objective Is Lakota Sand

36L	23	40	79	SEC SE SE	———		...	.....	Drilling.
4L	23	40	79	NEC NW SE	———		...	.....	Drilling.
24L	23	40	79	NEC SE SE	———		...	.....	Drilling.
31L	25	40	79	SWC SW NW	———		...	.....	Drilling.
3L	26	40	79	NWC NE NE	———		...	.....	Drilling.
22L	26	40	79	NWC SE NE	———		...	.....	Drilling.
24L	26	40	79	NEC SE NE	———		...	.....	Drilling.
6L	26	40	79	NWC NW SW	Muddy	1,767	...	.....	Temp. completed 87 bbls. day.
12L	26	40	79	CEL NE SE	———		...	.....	Drilling.
15L	26	40	79	SWC NE SE	———		...	.....	Drilling.
16L	26	40	79	SWC NW SE	———		...	.....	Drilling.
21L	26	40	79	NEC SW SE	———		...	.....	Drilling.
22L	26	40	79	NWC SE SE	———		...	.....	Drilling.
36L	27	40	79	SEC SE NE	Muddy	2,045	...	.....	Temp. completed 153 bbls. day.
1L	27	40	79	NEC NE SE	Muddy	2,090	...	.....	Temp. completed 275 bbls. day.
13L	34	40	79	SEC NE NE	Muddy	2,152	...	.....	Temp. completed 100 bbls. day.
33L	35	40	79	SEC SW NE	———		...	.....	Drilling.
18L	35	40	79	SWC NW NW	Muddy	2,115	...	.....	Temp. completed 105 bbls. day.
18L	35	40	79	SWC NW SW	Muddy	2,082	...	.....	Temp. completed 213 bbls. day.
34L	35	40	79	SWC SE SW	———		...	.....	Drilling.
3L	2	39	79	NWC NE NE	———		...	.....	Drilling.

SUNDANCE SAND DEVELOPMENT, SALT CREEK FIELD, WYOMING, MAY 1, 1926

(Note—These wells appear in the foregoing list of Lakota sand wells.)

Failures in Sundance Sand, Edge Wells

Well No.	S	T	R	Location	Sands		Thickness of Sand Feet	Total Depth Feet	Initial Prod., Bbls.
12L	25	40	79	CEL NE SW	Sundance	2,960-3,005	45	4,400	Water.
4L	2	39	79	NEC NW SW	Sundance	3,093-3,118	25	3,229	Dry.

Producing Wells in Sundance Sand

34X	23	40	79	SWC SE NW	2nd Sundance	2,896-2,965	69	3,075	55 bbls. oil.
					3rd Sundance	3,066-3,075	9	.....	Water, no oil.
34X	35	40	79	SWC SE NW	2nd Sundance	2,506-2,528	22	.....	Dry.
					3rd Sundance	2,828-2,870	42	2,870	6,388 bbls. oil, no water.

Probable Limits

A map prepared by United States Geological Survey representatives at Casper shows approximately 1,500 acres of inside and 600 acres of edge Lakota sand territory. The report on which this article is based classifies the acreage differently, giving it a total of 1,680 acres as follows:

	Inside	Edge	Total
Sec. 23-40-79	230	....	230
Sec. 24-40-79	....	40	40
Sec. 25-40-79	....	100	100
Sec. 26-40-79	640	....	640
Sec. 27-40-79	....	40	40
Sec. 34-40-79	....	80	80
Sec. 35-40-79	480	....	480
Sec. 36-40-79	....	10	10
Sec. 2-39-79	....	60	60
Total acres	1,350	330	1,680

The above 1,680 acres of proven leases have 31 producing wells, all of them shut in. Some are over a year old, but none has even been permitted to produce over a long period.

In making an estimate of 30,300,000 bbls. as a total recovery, the report candidly states that "small areas within the entire proved area where the wells are spaced one location apart are developed acreage, but there is no production data on these areas relative to the Lakota sand, except the initial production of the wells. There is no past production, or in other words, no total yield to date from these developed areas from which to estimate the probable future yield of the entire area. No part of the area has been depleted, therefore there is none of the area that has been drained. A man with much experience might overestimate or underestimate the probable ultimate recovery."

It was only after a study and consultation with others capable of expressing an opinion that the ultimate production figure was arrived at on a basis of barrels per acre on the inside and the edge of the Lakota sand zone and the number of acres credited to the productive portion of the Lakota sand in that field.

Estimated Potential Production

The potential production of the wells now in—completions and near completions—is estimated at 30,000 bbls. per day. The initial production of the 31 wells was around 50,000 bbls. The report expresses the belief that the production would fall off rapidly and that in the opinion of some who have been watching the Lakota sand development they would gradually go to water if placed on production.

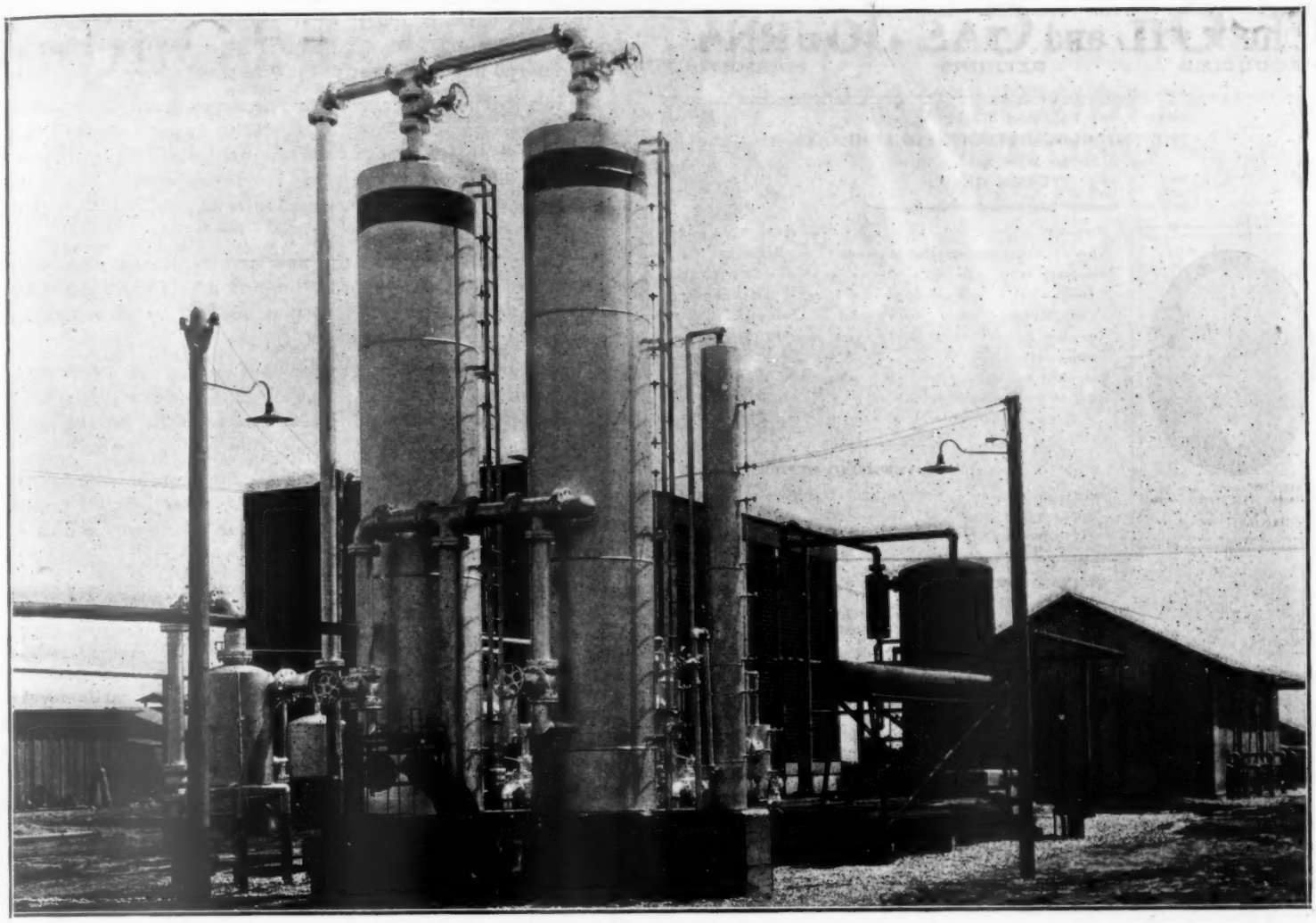
The Lakota sand productive area, the report says, is now practically defined, the water line being definitely established on the north, east and south sides of the area, but that for about 1 mile on the west side the water line is not definitely established. No wells within that space along the west side have yet penetrated the Lakota sand. The structure appears to be regular with a steep dip, about 20 degrees in half a mile. It was considered probable that the wells drilling to the Lakota sand on that side are close to the water line.

Variable Sand Thickness

A notable difference is seen in the thickness of the Lakota sand in wells that were drilled through that sand, says the report.

Well No. 33-L, SE cor. SW SW, Section 35-40-79, was drilled to determine the thickness of the sand and its saturation. It had 102 feet of Lakota sand from 2,268 to 2,370 feet. At 46 feet in the sand, or from 2,268 to 2,314 feet, the well flowed 3,000 bbls. a day. At 2,370 feet, where it was completed, its initial production was 3,250 bbls. a day. It

(Continued on Page 87)



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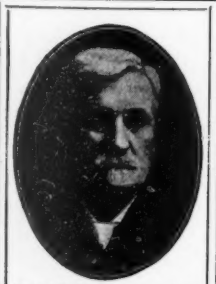

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WHY MORE GASOLINE IS USED

On the eve of the season of heaviest gasoline consumption, what is the outlook for 1926?

There has been endless discussion of the causes of the annual increase in consumption.

At first it was attributed solely to the increase in the number of cars.

But amazing as was the growth in the number of cars, the gain in the demand for gasoline was still more extraordinary.

The first suggestion was the greater consumption of the rapidly increasing number of commercial vehicles, trucks and delivery wagons.

Then the sudden development of the closed passenger car permitting all-year-'round driving was accepted as the answer.

Fast on the heels of the individual closed car came the nation-wide expansion of motor bus use threatening the business of the street railway and the steam railroad.

More recently there has been noted the number of families with two or more cars where one used to suffice.

And within the week attention has been directed to the multitude of woman drivers as another important factor in enlarging the demand for motor fuel.

There are more and more families where, owing to the congestion in the business districts and the difficulty of finding parking places, or the women's need for the car at home, the man of the house leaves his car at home and rides to work on the motor bus or is driven down town and the car taken home again by one of the family.

This means, of course, that, instead of the car being parked all day, it is being used by the women of the house for shopping, for visiting or for pleasure driving, meaning that much greater consumption of gasoline daily.

Taking all these factors making for greater gallonage per car the question suggests itself, what proportion of the 20 per cent gain in consumption last year was due not to the larger number of cars registered but to greater use of the cars?

Dividing the number of cars registered into the number of gallons of gasoline consumed by domestic demand we find that in 1921 it figured out 432 gallons per car per year. In 1922 it was 439 gallons; in 1923 it ran 442 gallons; in 1924 (probably owing to the unseasonable spring) it was one gallon less; but in 1925 it jumped to 471 gallons per car.

An analysis shows that the new cars registered last year accounted for two-thirds of the billion and a half more gallons consumed in 1925 than in 1924 and that one-third was consumed by greater use of the cars as a whole.

The 30 gallons per car greater consumption last year runs up to over a half billion gallons of gasoline in the year. The 2,251,000 cars added to the registration in 1925 accounted for around a billion gallons.

For the present year the outlook for consumption is even better. The four months' registration reported by State officials published in The Oil and Gas Journal annual motor car survey indicates an increase of 2,500,000 cars in 1926.

The estimated consumption of gasoline promises practicaly another 20 per cent gain.

The gallonage per car for the present year would then rise to 500 gallons against 471 last year, an increase of 29 gallons per car or almost the same as the gain in gallonage per car last year.

Thus in two years we shall have enlarged our annual consumption per car from 441 to 500 gallons, 59 gallons per car, or over a billion gallons a year from increased use.

Besides the factors mentioned as making for greater consumption, growth of commercial vehicles, buses and closed cars and women drivers, there is one other factor that must be considered.

The larger number of cars and greater use is congesting our streets and highways. Traffic regulations are being made stricter and as a consequence drivers have to make many more stops than a few years ago.

Just what this means, any observing motorist who compares his mileage per gallon on a trip out into the country with his daily mileage in town will know.

The Automobile Club of Southern California has been so impressed with this fact that it has had a survey made of the effect of the boulevard stop law in Los Angeles. Its figures indicate that the 580,000 automobiles in that county make approximately 11,600,000 stops daily, or 20 to a car. These stops cause 45,240 gallons of gasoline to be consumed that otherwise would not be and for which the motorists of Los Angeles County pay $8,143 a day or $2,772,195 yearly.

On that basis every additional stop costs the motorist one 250th part of a gallon or 250 stops cost him an extra gallon.

It does not seem much for one stop but for 20 stops a day for the half million or so cars in Los Angeles County the automobile club figures means an addition of 25 gallons a year per car or 15,000,000 gallons for that one county.

The traffic stops must evidently be counted as a not unimportant factor in the enlarged consumption of gasoline.

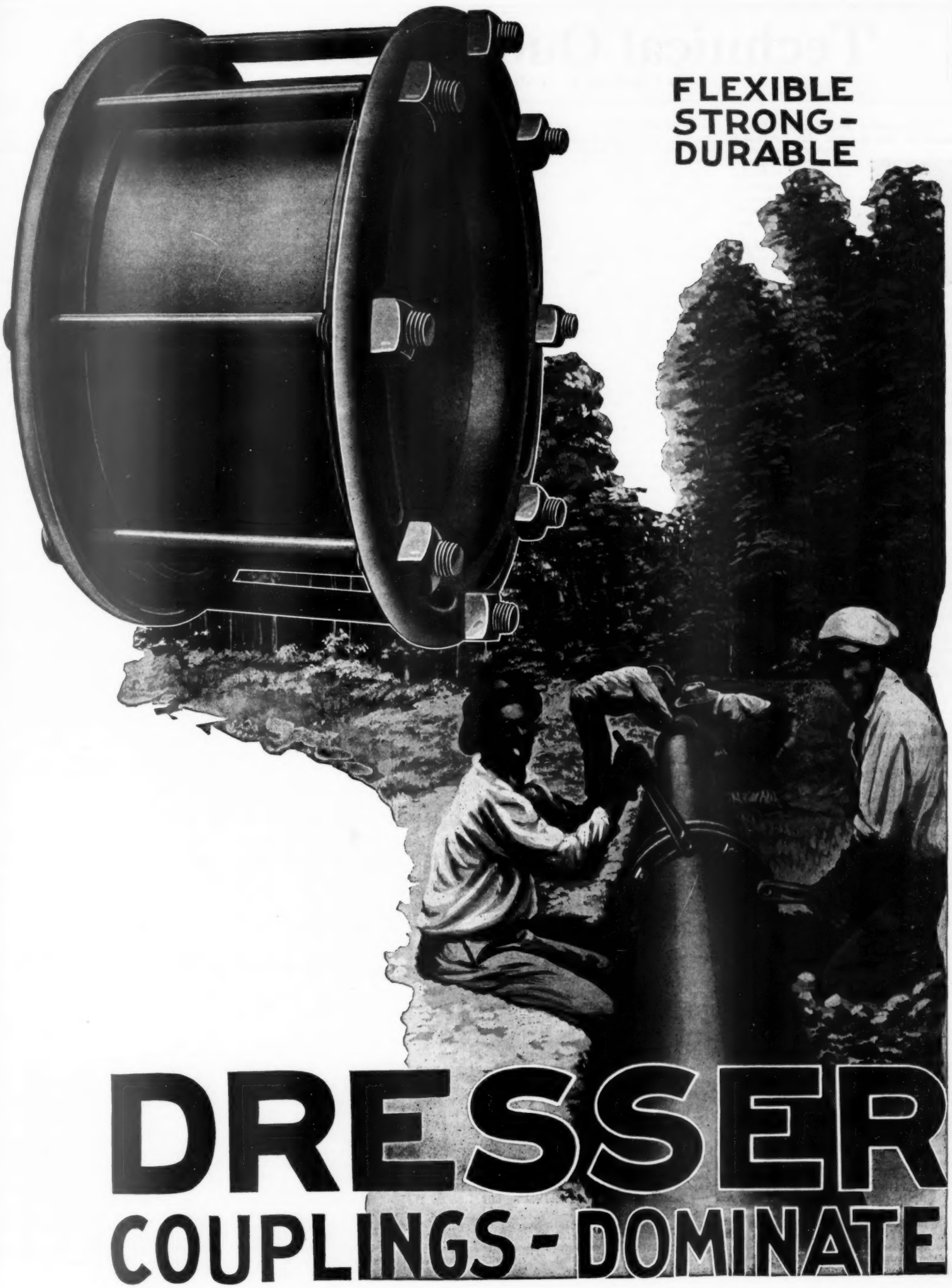
The upshot of the matter is that in any consideration of the annual increase in demand for motor fuel greater use of the car is responsible for half as much of the increase as is the gain in the number of cars registered.

It jumped the demand a half billion gallons last year and all signs point to it doing as much this year.

And nobody believes that we are anywhere near the fullest use of the cars we have today. The extension of good roads, the spreading out of cities and building of new streets, are inviting greater use of the car all the time.

The demand for gasoline will continue to grow with both the number of cars and their use.

XUM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Technical Questions Answered

By CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation.

Those connected with the marketing departments and others interested in the utilization of petroleum products are also invited to take advantage of the new service.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

USE OF NATURAL GAS

To what extent is gasoline obtained from natural gas?—H. E. A.

According to the latest, 1924 figures available, the total production of natural gas was approximately 1,300,000,000,000 cubic feet. Of this 3 per cent was converted to gasoline. The other uses were:

	ct.
Industrial plants	34
Drilling and pumping	27
Domestic fuel	22
Loss	12
Miscellaneous use	2

The Bureau of Mines reports a production of nearly 934,000,000 gallons of gasoline from natural gas during the year 1924. This is equivalent to a yield of 0.9 gallons per 1,000 cubic feet.

A report on the natural gasoline industry for 1924 may be obtained from the Bureau of Mines, Washington, D. C. This report was analyzed in The Oil and Gas Journal February 18, March 11 and May 6, 1926.

DECOMPOSITION OF LUBRICATING OILS

A lubricating oil which had been in service for some time and under quite high temperature turned black and a test showed a trace of acid. We should like to know the cause of this and is there any danger of corrosion if we continue to use this kind of oil?—C. J. M.

This appears to be a natural condition which frequently develops. Any normal oil will decompose to some extent when held at elevated temperatures and there will be a darkening of the oil, but this will seldom extend far enough to produce serious decomposition. Tests for viscosity, flash and pour will serve to indicate to what extent deterioration has advanced.

If the oil was of first class quality when it was put into service, that is to say, it was fully refined and free from acid, etc., there is no danger of corrosion from the very small quantity of organic acids resulting from slight decomposition of some petroleum compounds. Many investigations of reported corrosion from a so-called breakdown of the lubricating oil have shown that there was not sufficient acid formed to cause corrosion and that the trouble could be traced to faulty refining.

VOLATILITY OF STRAIGHTRUN AND CRACKED GASOLINE

What is the comparative value, on the basis of volatility, of straightrun and cracked gasoline?—A. P. C.

The straightrun gasoline from different crudes is not the same as to volatility and must be adjusted to a standard condition, such as U. S. Motor gasoline, by blending, fractionating towers and condensing conditions. In other words, the production of a specified gasoline from crude must always depend on the crude and the apparatus in addition to the skill of the operator.

With the installation of adequate towers and cooling factors, when there is proper temperature control combined with operating skill, the modern cracking process is capable of making a gasoline superior in volatility to that obtained from the crude. The reason for this opinion is based on the fact that a straightrun product must depend on the gravity of the crude for the very light portions while the proportion of these may be fixed by the operator of the cracking still when it includes modern equipment.

A very low initial and good endpoint may be run direct from the top of the bubble tower, for example, and the distillate from the bottom must be rerun for gasoline in a similar manner as when reducing the crude. In this way a direct and an indirect gasoline may be obtained. When a crude will not produce a low initial gasoline it must of course be supplied from some other source, such as a pressure still gasoline or natural gasoline. The cracking still has been brought to such a high state of perfection that the results are largely a matter of degree and are dependent upon local requirements.

The production of cracked gasoline is a building process, and the result must vary with the material, the kind of apparatus and the processing conditions. All of these conditions may be controlled so that a product will be obtained practically identical with a gasoline direct from the crude.

BURNER OIL FLASH POINT

Kindly give me your opinion about the following: A burner oil was ordered on a specification of 170 degrees Fahrenheit flash and an oil with a flash point of 210 degrees Fahrenheit was furnished and it is claimed that this oil meets the specification. Is this correct?—O. E. B.

A flash point specification is commonly understood to mean that the product should not flash below the temperature indicated, consequently in the absence of a maximum limit being also stipulated it would seem that this oil does meet the specification. This kind of a specification is frequently stated "Not below 170 degrees Fahrenheit" and thus misunderstandings avoided.

There are two reasons for a low specification. On one side it makes easy starting of the fire and on the other it is a guard against a dangerous liquid. When the flash point is unreasonably high, too much preliminary fire or auxiliary heating may be required, for so this reason a low flash is desirable. However, various laws prohibit the use of very low flash oil because of the fire hazard. The quality could be fixed between a low and a high limit, but in this special case an oil having only 40 degrees higher flash than the low limit the product should be satisfactory.

BRIGHT STOCK AND GULF COAST OIL

How does the bright stock from average Mid-Continent crude, when made by the centrifugal process, compare with cold settled Pennsylvania stock and heavy low cold test Gulf Coast lubricating oil? —C. R. W.

The quality of any lubricating oil is, as a usual thing, indicated by its flash or fire test which represents the ability of the oil to withstand heat, its viscosity which indicates its body, and its cold test which indicates the facility with which it may be used.

In the case of bright stock manufactured from a Mid-Continent crude by the centrifugal process the resulting oil is of extremely low cold test compared with Pennsylvania cold settled stock, but is not as low in cold test as the heavy Gulf Coast lubricating oil. A cold settled Pennsylvania bright stock will not be as viscous for a given flash and fire test as will the bright stock made from Mid-Continent crude, or to state the matter another way, for a given viscosity has a higher flash and fire test than can be secured from a Mid-Continent crude.

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Each of these oils has its uses. Each one is probably more suitable for certain uses than the other two. As a motor lubricant we would judge the bright stock from a Mid-Continent crude made by the centrifugal process to be the best all-around oil for the reason that the flash and fire test of the oil is comparatively high and the low cold test permits facility in its use.

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Of what practical importance is the odor of gasoline?—C. W. K.

In a general way it might be said that the odor of gasoline is of no practical value. It is largely a matter of taste and personal comfort, but there is the fact that a sour or acid odor may suggest further examination for the presence of corrosive substances. Sometimes the odor will suggest the source of the gasoline and the method of manufacture, because of the presence of some compound or class of compounds known to exist in a certain crude having a distinctive odor and in a similar way a cracked product is often recognized. Less attention is paid to odor now than a few years ago.

BLENDING FOR GRAVITY

We would like to have a description of several different ways for calculating the mixture necessary to make a product of a desired gravity. We have use for this kind of calculating with naphtha and gasoline and with acids, soda and such with water, so would thank you for the information.—N. C. P.

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Example Heavy Liquids—A liquid having a specific gravity of 1.50 is to be diluted with water so as to produce a mixture having a specific gravity of 1.20 and it is desired to know what quantities of each should be used. Set down 1.50 and place 1.20 beneath it. The making the subtraction .30 is obtained. With the removal of the decimal points, it is indicated that 30 volumes of water should be added to 20 volumes of the liquid having a gravity of 1.50 to produce the desired product.

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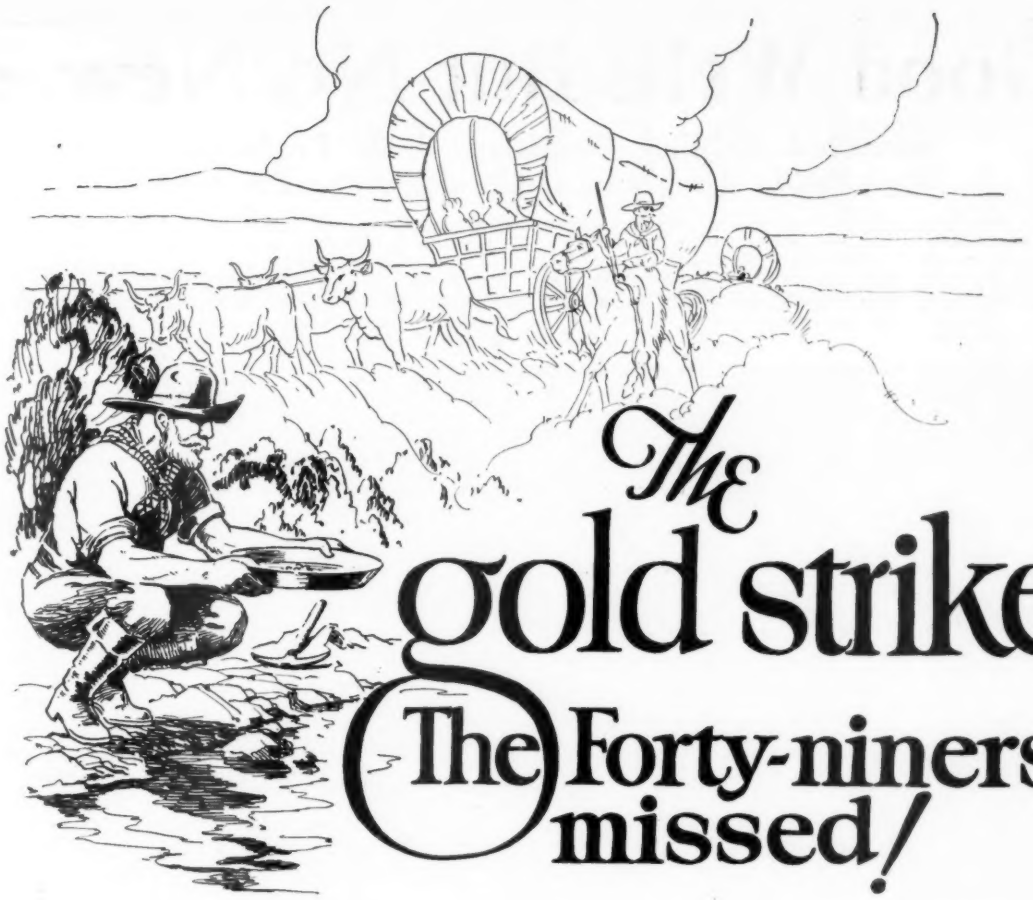
The steam burner is expensive due to the steam consumption, and the air type burner is often even more expensive because of the production cost of the high pressure air and the tendency to localize the heat. The high pressure burner, using oil alone, is probably the most economical on an operating basis and the distribution of the heat.

Furnace conditions are more often the cause of low efficiency than the type of burner.

XUM



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629 South Spring St. Los Angeles, Calif.

Fernholtz Briquetting Process

Technical Questions Answered

By CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation.

Those connected with the marketing departments and others interested in the utilization of petroleum products are also invited to take advantage of the new service.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

USE OF NATURAL GAS

To what extent is gasoline obtained from natural gas?—H. E. A.

According to the latest, 1924 figures available, the total production of natural gas was approximately 1,300,000,000,000 cubic feet. Of this 3 per cent was converted to gasoline. The other uses were:

	ct.
Industrial plants	34
Drilling and pumping	27
Domestic fuel	22
Loss	12
Miscellaneous use	3

The Bureau of Mines reports a production of nearly 934,000,000 gallons of gasoline from natural gas during the year 1924. This is equivalent to a yield of 0.9 gallons per 1,000 cubic feet.

A report on the natural gasoline industry for 1924 may be obtained from the Bureau of Mines, Washington, D. C. This report was analyzed in The Oil and Gas Journal February 18, March 11 and May 6, 1926.

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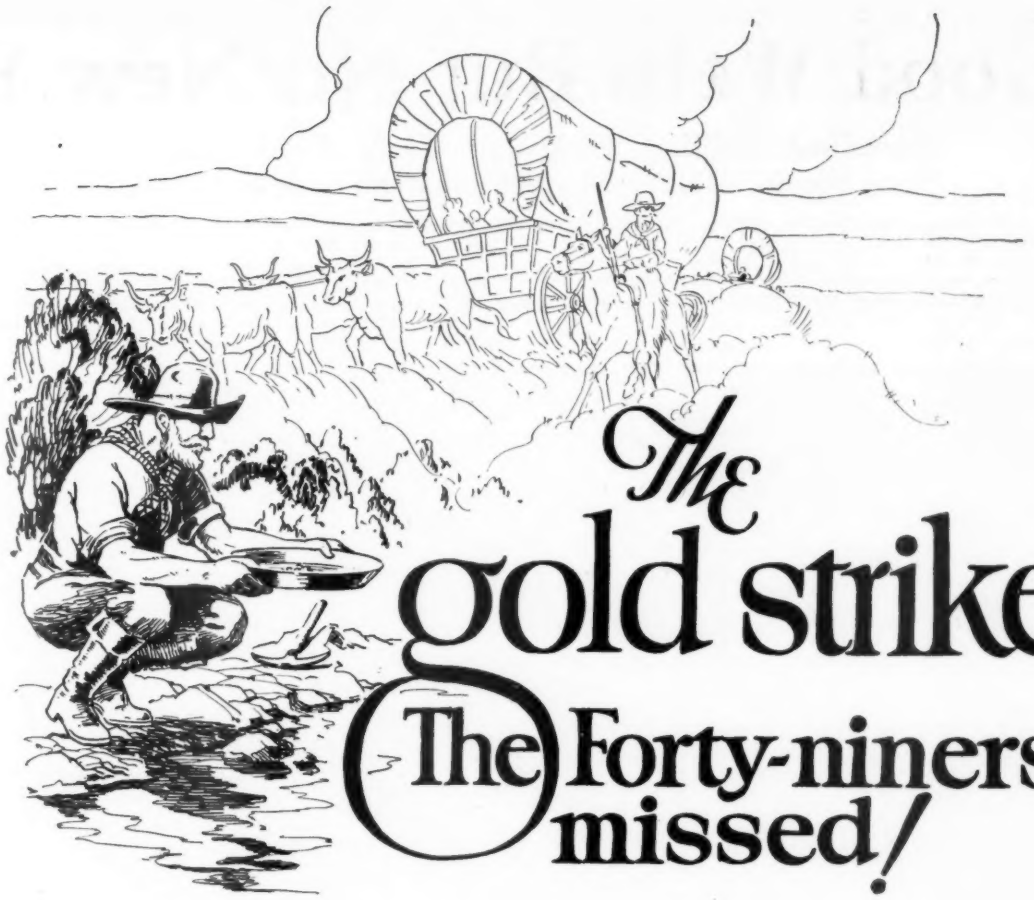

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XUM

Get Good Wells But No New Pools

Intensified Drilling Campaign Finds Production in Many Fields. Oklahoma and Panhandle Lead in Activity

Intensified drilling activity in many fields is resulting in the completion of good wells. In the Texas Panhandle 56 locations were reported, 20 by the Gulf Production Co. In Oklahoma 767 first wells are testing new leases. In California deeper zone development in the northwest extension of Long Beach is being planned. Ventura is expected to reach 40,000 bb'ls. by August 1 and perhaps 50,000 by the end of summer.

The Wilcox-Pampa Oil Co. completed a 3,000-bbl. well in Gray County, Texas Panhandle. The Kewanee Oil Co. brought in a well in the Bixby district, Tulsa County, Oklahoma, making from 130 to 160 bbls. an hour.

California

Plans are already under way for the deepening of a number of upper zone producers in the northwest extension of the Long Beach Field as a result of the completion of several good flowing wells from the lower horizon. The Barnsdall Oil Co.'s No. 11 O'Dea at Rosecrans came in making 1,730 bbls. of 41.1 gravity crude. The Standard Oil Co. added 1,340 bbls. to its production at Inglewood with the comp'etion of two flowing wells there. This company also completed a well just north of the town lot area at Huntington Beach, the well making 588 bbls. of 26.9 gravity oil. Operations are expected to continue unabated in the Ventura Avenue Field with a possibility production there may reach 40,000 bbls. before August 1 and a chance of going to 50,000 before the end of summer.

Louisiana-Arkansas

Considerable territory in Louisiana and Arkansas was more or less condemned as a result of the failure of three deep sand tests. Moorefield and associates' No. 1, 14 miles southwest of the El Dorado Field was abandoned at 3,015 feet without a trace of oil while two tests in DeSoto Parish, Louisiana, failed to procure production. Lisbon continues to be a most active area with numerous completions last week and 2,000 bbls. of new production. Practically all the new work and interest in the Urania Field centers around the Montague Oil Co.'s extension well in Section 11. Urania production dropped 3,000 bbls. last week when large wells in the field declined rapidly.

The Empire Gas & Fuel Co.'s No. 1 Russell, Section 14-10-24, Johnson County, Arkansas, is a gas well and was reported as blowing wild on Tuesday of this week.

The biggest gas well completed in two years in the Monroe Field was brought in by the Palmer Corp., its No. 1 Millsap making 41,000,000 feet. The Ohio oil Co. also completed a 40,000,000-foot gasser in Pine Island. A 1,000-bbl. well was completed a mile west of Tullos.

Oklahoma

The vast amount of new work being done in Ok'ahoma is exemplified by the fact there are 767 locations made, rigs up and wells drilling, every one of which is a first operation, meaning 767 new leases are subjects of tests for oil. The new work is scattered over a wide area. The Kewanee Oil & Gas Co. has a well in the Bixby district, Tulsa County, which is estimated as flowing from 130 to 160 bbls. hourly of crude testing between 52 and 53 degrees. The Foster Reiter Corp. reports a showing of oil in its test in the southwest corner Section 4-19-1w, Logan County, the well filling up 4,500 feet after drilling three feet in the sand.

Texas Panhandle

Fifty-six new locations were reported in the Texas Panhandle, the Gulf Production Co. leading with 20.

The Wilcox-Pampa Oil Co. completed a well in Gray County which made 6,594 bbls. the past 48 hours, the best granite wash well in the Panhandle.

Cockrell & McIlroy's well in Block Y Hutchinson County, made 270 bbls. an hour. The McMan Oil Co. had a 1,600-bbl. producer.

Kansas

A greater number of new operations than usual is reported from Kansas the north end of Greenwood County and the south part of Lyon County being especially active.

North Texas

The Prairie Oil & Gas Co. found a new pool in the Cross Cut area of northern Brown County with a well making 300. bbls. South of this the Humble Co. got a 600-bbl. well in the Juan Delgado Survey.

A 1,200-bbl. well was completed in the deep sand southeast of Ivan in Stephens County.

Six producers on the Cook ranch in Shackelford County raised the production of the area to 8,000 bbls.

A 10,000,000-foot gasser was completed in the Dibrell Pool in Coleman County. In Young County a 500-bbl. well was brought in in the Rachuig area.

Kentucky-Tennessee

A 50-bbl. producer in the Hopewell or Crocus Creek district on the Cumberland-Adair County line in Kentucky was the best of the week. A wildcat drilling on Dunville Dome, in Casey County, was reported at 400 feet, passing through showings of both gas and oil. The wildcat in White's Bottom, Cumberland County, that had a fair showing has gone to water. It may be drilled deeper.

Scarcity of water caused the shutting down of many drilling wells in various parts of Kentucky.

Michigan

Michigan is promised many new tests and leasing activities are spreading on all sides of Saginaw. Nine wells have been completed, all producers, a very unusual showing for a new field. Some of the present tests are being delayed by fishing jobs.

Central West

A 300-bbl. flush well is reported from Wabash County, Illinois, from what appears to be a new sand. Drilling deeper of an old producer near Bridgeport, Lawrence County, Illinois, led to the discovery of a new pay. It is reported that some of the strings of drilling tools in the Wabash County Field may be moved to southwestern Indiana where Veale Township in Daviess County is being talked of.

Pennsylvania-West Virginia

Several good wells have been completed in the southeastern Ohio and West Virginia fields. Hope Construction & Refining Co. got a 95-bbl. producer in Licking County; East Ohio Gas Co., a 95-bbl. well in Holmes County; Pure Oil Co., 80 bbls. in Knox County, Ohio; and the South Penn Co. a 95-bbl. completion in the Grant district of Ritchie County, West Virginia.

In Mason County, West Virginia, the Ohio Fuel Oil Co. has a wildcat averaging 6 bbls. a day which may lead to something better. A second test is being started. All previous production was far removed.

Southwest Texas

The Marland Edwards lime test 18 miles east of San Antonio which had proven a structure and was reported to have a slight showing of oil, tested sulphur water and registered a failure.

W. F. Morgan completed a well flowing 1,500 bbls. in the Randado Field.

Simms Oil Co.'s No. 1 Dinn, in Duval County, 5 miles north of the Cole gas field, at 1,720 feet, had a gas pressure necessitating iron oxide to hold it in. This is practically the same depth as gas and oil in the Cole Field and may be a 5-mile extension.

Much wildcatting is going on in Jim Hogg County. In the Cole Field Cole Petroleum Co. is to drill five deep tests to 4,000 feet or below. Two are started and timbers on the ground for the third. Cin-Tex Petroleum Co. is to drill a mile to the northeast where it is thought oil may be found as it is cut off in most directions by gas production.

It is beginning to be feared that the Piedras Pintas salt dome may not have more than one well. The Aviators Field in Webb County has been extended three-quarters of a mile south, carrying the proven area within that distance of the Bruni tracts.

Gulf Coast

More than 50 per cent of the new production in the coastal region is coming from the deeper sand area. The Vacuum Co. completed a 2,500-bbl. well in Boling Pool, increasing the production there just when it was declining. In Orange Pool the Orange Petroleum Co.'s No. 1 Berwick well, five years old, was worked over and responded with 2,500 bbls. flow. Humphreys Corp.'s well at Sour Lake is doing 1,200 bbls.

Canada

A new wet gas flow in the McLeod well in Turner Valley, southwest of Calgary, is making about 125 bbls. of oil from 3,678 feet. The increase in drilling operations and the formation of new companies continues in the Canadian northwestern fields.

Rocky Mountain Area

Unable to shut off the water that comes in from above in the Cane Creek well near Moab, Utah, it is to be drilled deeper and a second test is being started by the Midwest and Utah Southern companies. Besides the test on Shaffer Dome another is to be begun on the Elk Ridge anticline.

A showing on the Eight Mile Lake Dome in Carbon County, Wyoming, which has produced gas only during the past three years may open a new field. The Producers & Refiners and Kinney Coastal companies drilling a wildcat on the Garland anticline in Big Horn Basin got 7,000,000 feet of gas.

Late News From the Fields

OKLAHOMA

The Kewanee Oil & Gas Co. in the CSL NE NW, Section 4-16-13, Bixby district, Tulsa County, has a well in the top of the Turkey Mountain or lowest Wilcox sand, the top of which was found at 2,075 feet, and it was flowing on Monday and Tuesday at a rate variously estimated at from 130 to 160 bbls. an hour. The company's estimate on the well is between 3,000 and 3,500 bbls., while Prairie Pipe Line gaugers thought it was making as high as 4,000 bbls. a day. The Prairie was taking the oil on Monday at the rate of 80 bbls. an hour, and preparing to handle it all. The oil is between 52 and 53 degrees gravity. The Kewanee Oil & Gas Co. owns the east half of the northwest quarter. Close-in acreage is owned by the Prairie Oil & Gas Co., the Petroleum Co., The Texas Company (formerly Pulaski acreage) and the Selby Oil & Gas Co.

The Wrightsman Petroleum Co., Riverland Oil Co. and Lorraine Petroleum Co.'s No. 1, C SE, Section 6 24-8, Osage County, was reported making 1,440 bbls. a day on Monday from sand at 2,832 feet drilled in about 1 foot.

The Foster-Reiter Corp. reports a showing of oil in a test in the SW cor. Section 4-19-1w, Logan County. Sand was found at 4,575 feet, which was drilled in 3 feet and the well is said to have filled up 4,500 feet. There is 1,200 feet of open hole and operations were shut down to await 5-inch casing.

J. H. Wright's No. 8 Tahkaney, NW cor. SE SE, Section 24-17-10, Creek County, is good for 800 bbls. in sand at 2,434-40 feet.

Late production reports on several pools in Oklahoma show Ingalls to be averaging 6,582 bbls. a day; Davenport 10,337 bbls.; Stroud, 2,077 bbls; Skellyville or Kendrick, 4,223 bbls., and Deep Rock 2,301 bbls.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., June 8.—Simms Oil Co.'s No. 1 Dinn, in Duval County, 5 miles north of the Cole Gas Field, at 1,720 feet has a gas pressure necessitating iron oxide to hold it in, practically at same depth as gas and oil in Cole Field and may be 5-mile extension.

MEXICO

Huasteca Petroleum Co. completed No. 12 Chapapote Nunez, flowing 25,000 bbls. of oil initial at depth of 2,121 feet.

Transcontinental Petroleum Co., Mexican subsidiary of Standard Oil Co. of New Jersey, completed No. 6 Las Piedras flowing 3,000 bbls. daily initial, from depth of 1,500 feet.

Gulf Oil Co. completed No. 24 Lopez, producing 1,500 bbls. daily initial at 1,565 feet.

LOUISIANA-ARKANSAS

SHREVEPORT, La., June 8. — The biggest gas well to be completed in the past two years in the Monroe, La., Field was completed Monday for a 41,000,000-foot producer. It was the Palmer Corp.'s No. 1 Millsap, C SE SE, Section 36-20-4e, and was completed at 2,189 feet with 630 pounds rock pressure.

It is reported that the Empire Companies' No. 1 Russell, Section 14-10-24, Johnson County, Arkansas, deepened is blowing wild. The well was completed as a 10,000,000-foot gasser in March.

J. S. Abercrombie & Co.'s No. 7 King, CNL SE SW, Section 25-10 1e, was brought in making 1,000 bbls. of clean oil from sand at 1,519-24 feet. The well is about a mile west of Tullos.

Another big gasser was completed in Pine Island, the Ohio Oil Co.'s No. 18 E. K. Smith, Section 12 21-15. It is making 40,000,000 feet of gas rich in gasoline content, from 3,368 feet. The test was dry at 3,973 feet and was plugged back to 3,777 feet, where the casing was perforated. It was dry at that depth and the hole was plugged back to the producing horizon.

KENTUCKY

TOLEDO, Ohio, June 5.—Advice from James Irwin, oil operator and geologist from Dunville, Ky., states that his wildcat well being drilled by himself and C. H. Anschuts on the Ben Russell farm, 2 miles south of Dunville, in Casey County, Kentucky, found the Second Sunnybrook sand at 590 feet and have a nice showing of both oil and gas and looks like it might make a nice producer.

(Continued on Page 130)

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ENGINES

Good Producers in North Texas Field

New Pool in Northern Brown County. Six Completions Run Shackelford Cook Field in Above 8,000 Barrels Daily

By C. D. Lockwood
Staff Correspondent, North Central Texas

FORT WORTH, Tex., June 7.—The opening of a new pool in the Cross Cut district of northern Brown County, the completion of a 600-bbl. extension well in the Juan Delgado Survey of the same district by the Humble Oil & Refining Co., the discovery of a 1,200-bbl. lime well about 3 miles southeast of Ivan in Stephens County, the addition of six producers in the Shackelford County wonder pool, raising its production above 8,000 bbls. daily, a 10,000,000-foot gasser in the Dibrell Pool of Coleman County and a 500-bbl. completion in the Rachuig area of Young County were among the leading developments in the North Central Texas fields during the past week.

The Cross Cut discovery was made by the Prairie Oil & Gas Co. in its No. 1 Trammel, near the north line of Brown County, about half-way between the Cross Cut and Pioneer pools. This well topped the sand at 1,324 feet and started flowing by heads when the rig burned. The fire was extinguished Saturday and fishing for tools was in progress Monday. The well continued flowing by heads and was rated good for about 300 bbls. by the owners. No new locations have been announced yet but several probably will start up around it immediately.

The Humble Oil & Refining Co.'s extension well is in the NE cor. of Section 2, Juan Delgado Survey, about 3 miles southeast of the new Prairie well and northwest of the Cowboy Evans Pool. It was rated good for 600 bbls. from sand at 1,149-59 feet.

Six Wells On Cook Ranch

Last week was a big seven days in the Cook Ranch Pool of Shackelford County for six new wells were added and while they are not in the favored part of the area, they combined to raise the production well above the 8,000-bbl. mark. Roeser & Pendleton's No. 1 Cook B-84, made 850 bbls. initially from sand at 1,337-61 feet; No. 8 Cook B-85, made 700 bbls. at 1,324-49 feet; and Roeser & Pendleton's No. 12 A-85 started off at 500 bbls. from sand at 1,308-24 feet. Roeser & Pendleton's No. 7-B-85 and No. 3-B-85, and the joint interests' No. A-11-85 were the other completions. Following is the production by wells in this pool Monday:

	Barrels
Roeser & Pendleton and Marland Oil Co.'s:	
A- 1-85	460
A- 4-85	775
A- 5-85	250
A- 6-85	890
A-11-85	400
A-12-85	80(CO)
A- 1-84	260
A- 4-84	290
A- 5-84	310
A- 9-84	290
	4,005
Roeser & Pendleton's:	
B- 1-85	910
B- 2-85	1,425
B- 3-85	236
B- 7-85	425
B- 8-85	325
B- 1-84	166
	3,487

Roeser & Pendleton and Marland Oil Co. made a new location for No. A-12-84, 450 feet from north line and 150 feet from east line SW cor. SE, Section 84, Block 10, E. T. R. R. Survey, and were building rig. Roeser & Pendleton also made location for No. B-4-84, 450 feet from the south line and 150 feet from the east line of NW cor. SE SE, Section 84. The Humble Oil & Refining Co.'s No. 5 Cook was drilling at 1,150 feet; No. 3 was fishing at 1,265 feet.

Deep Well in Stephens

The Texas-Consolidated Oil Co., a California concern, brought in an excellent deep well in Stephens County, south of Ivan. The well is No. 7 Martin in Section 1,041, T. E. & L. Survey, 1,200 feet from the south line and 500 feet from the east line. It was shut in for 18,000,000 feet of gas and spraying 45 bbls. of oil at 3,915-25 feet about three months ago, then was drilled deeper last week. At total depth of 3,957 feet it made 1,240 bbls. the first 24 hours. The Phillips Petroleum Co. is starting an east offset to this well and the Phillips Petroleum Co. and Texas-Consolidated Oil Co. are starting a joint test to the south.

Semiwildcat Show

In Eastland County, Corzelius Brothers' No. 1 Glenn Garrett, a semiwildcat, topped sand at 1,420 feet and drilled to 1,440 feet still in sand with a good show of oil. They will test before going any deeper.

In Young County, the Sun Oil Co.'s No. 2 Deitrich, a southeast extension of the Gambrell Pool, swabbed at the rate of 150 bbls. in the first 24 hours at 1,168-70½ feet. The Atlantic Oil Producing Co.'s No. 4 Rachuig "B" was flowing through the drill pipe at the rate of 400 to 500 bbls. daily from sand at 1,149-54 feet.

In Crane County, Gilliam & Logan's No. 1 Penix was shut down at 3,410 feet with a hole full of salt water from heaving sand.

PRODUCTION BY FIELDS
For Week Ending May 31, 1926

Electra	
Atlantic Oil Prod. Co.	48
Empire Gas & Fuel Co.	676
Gulf Prod. Co.	1,035
Humble Oil & Ref. Co.	150
Magnolia Pet. Co.	3,450
Panhandle Ref. Co.	48
Phillips Petroleum Co.	18
Prairie Oil & Gas Co.	106
Rio Bravo Oil Co.	598
The Texas Company	3,474
Texhoma Oil Ref. Co.	1,353
Miscellaneous	5,791
Total	16,744
Burkburnett	
Gulf Prod. Co.	430
Humble Oil & Ref. Co.	380
Magnolia Pet. Co.	2,638
Panhandle Ref. Co.	240
Prairie Oil & Gas Co.	31
Sinclair Oil & Gas Co.	54
Skelly Oil Co.	185
Sun Oil Co.	56
The Texas Company	378
Texhoma Oil & Ref. Co.	563
Miscellaneous	7,370
Total	12,325
Iowa Park	
Atlantic Oil Prod. Co.	80
Gulf Prod. Co.	98
Humble Oil & Ref. Co.	165
Magnolia Pet. Co.	390
Panhandle Ref. Co.	29
Roxana Petroleum Corp.	9
Simms Oil Co.	10
The Texas Company	273
Texhoma Oil & Ref. Co.	403
Miscellaneous	2,885
Total	4,342
Wilbarger	
Atlantic Oil Prod. Co.	116
Empire G. & F. Co.	978
Gulf Prod. Co.	40
Humble Oil & Ref. Co.	3,747
Phillips Petroleum Co.	4,125
Prairie Oil & Gas Co.	137
Roxana Petroleum Corp.	458
The Texas Company	36
Texhoma Oil & Ref. Co.	87
Miscellaneous	4,078
Total	13,802
Archer	
Atlantic Oil Prod. Co.	562
Barnsdall Oil Co.	1,225
J. S. Cosden	730
Empire Gas & Fuel Co.	568
Gulf Prod. Co.	3,274
Humble Oil & Ref. Co.	1,531
Independent Oil & Gas Co.	20
Magnolia Pet. Co.	1,544
Marland Oil Co.	450
Panhandle Ref. Co.	128
Phillips Petroleum Co.	659
Prairie Oil & Gas Co.	2,312
Roxana Petroleum Corp.	353
Simms Oil Co.	590
Sun Oil Co.	362
The Texas Company	3,155
Texhoma Oil & Ref. Co.	3,238
Tidal Oil Co.	38
Miscellaneous	13,037
Total	33,776
Young	
J. S. Cosden	55
Gulf Production Co.	268
Humble Oil & Ref. Co.	325
Magnolia Pet. Co.	175
Marland Oil Co.	1
Mid-Kansas Oil & Gas Co.	10
Panhandle Ref. Co.	152
Phillips Petroleum Co.	25
Prairie Oil & Gas Co.	10
Roxana Petroleum Corp.	150
Simms Oil Co.	942
Sinclair Oil & Gas Co.	354
Sun Oil Co.	66
The Texas Company	493
Texhoma Oil & Ref. Co.	283
Tidal Oil Co.	142
Miscellaneous	3,308
Total	6,749
Stephens	
Arkansas Fuel Oil Co.	25
Empire Gas & Fuel Co.	25
Gulf Prod. Co.	1,182
Humble Oil & Ref. Co.	675
Magnolia Pet. Co.	375
Mid-Kansas Oil & Gas Co.	1,665
Phillips Petroleum Co.	350
Prairie Oil & Gas Co.	825
Republic Prod. Co.	135
Roxana Petroleum Corp.	45
Simms Oil Co.	30
Sinclair Oil & Gas Co.	70
Sun Oil Co.	140
The Texas Company	1,045
Texas Pacific Coal & Oil Co.	1,150
Transcontinental Oil Co.	2
Miscellaneous	4,775
Total	12,524
Shackelford	
Empire Gas & Fuel Co.	25
Humble Oil & Ref. Co.	950
Magnolia Petroleum Co.	50
Phillips Petroleum Co.	710
Prairie Oil & Gas Co.	10
The Texas Company	200
Texhoma Oil & Ref. Co.	75
Miscellaneous	7,475
Total	9,495
Ranger	
Arkansas Fuel Oil Co.	5
Gulf Prod. Co.	485
Humble Oil & Ref. Co.	65
Magnolia Petroleum Co.	685
Mid-Kansas Oil & Gas Co.	125
Panhandle Ref. Co.	125
Phillips Petroleum Co.	5
Prairie Oil & Gas Co.	550
Republic Prod. Co.	50
Simms Oil Co.	25
Sinclair Oil & Gas Co.	325
The Texas Company	140
Texas Pacific Coal & Oil Co.	825
Transcontinental Oil Co.	25
Miscellaneous	2,425
Total	5,860
Eastland-Comanche	
Empire Gas & Fuel Co.	10
Humble Oil & Ref. Co.	75
Magnolia Petroleum Co.	650
Mid-Kansas Oil & Gas Co.	150
Phillips Petroleum Co.	40
Prairie Oil & Gas Co.	75
Sinclair Oil & Gas Co.	20
Skelly Oil Co.	135
The Texas Company	105
Transcontinental Oil Co.	25
Miscellaneous	725
Total	2,000
Brown	
Cosden Co.	575
Humble Oil & Ref. Co.	325
Phillips Pet. Co.	50
Prairie Oil & Gas Co.	750
Simms Oil Co.	40
The Texas Company	625
Witherspoon Oil Co.	25
Miscellaneous	4,990
Total	7,380
Callahan	
Humble Oil & Ref. Co.	3
Prairie Oil & Gas Co.	250
The Texas Company	170
Texas Pacific Coal & Oil Co.	25
Miscellaneous	3,120
Total	3,568
Miscellaneous Pools	
Reagan County	32,098
Clay County	502
Montague County	3,482
Jack County	125
Throckmorton County	703
Baylor County	159
Palo Pinto County	535
Coleman County	2,010
Scurry County	50
Mitchell County	3,289
Crockett County	811
Upton County	411
Howard County	89
Crane County	51
Total	44,306
Panhandle	
Carson County	2,521
Hutchinson County	34,829
Wheeler County	80
Gray County	501
Total	37,931
Grand total	210,802

Completions Outside of the Panhandle
Wichita County

Humble Oil & Refining Co.'s No. 1 Roller, J. Rector Survey, made 6 bbls.

(Continued on Page 130)

GULF PRODUCTION CO. TAKES LEAD IN NEW PANHANDLE LOCATIONS

By C. D. Lockwood

FORT WORTH, Tex., June 8.—If anybody retained through the past few dizzy weeks the forlorn hope that the Panhandle of Texas would be held as a reserve by the large companies and not drilled up in a mad frenzy of development that hope was just about completely buried this week under another deluge of new locations in which the Gulf Production Co. took the leading role, staking out more than 20 new ones. These, with 31 "first reports" in Hutchinson County and one each in Carson, Lipscomb and Ochiltree Counties, the latter two in the northeast part of the Texas Panhandle adjoining Oklahoma, bring this week's total of new operations to 56 in the Amarillo district. The Prairie Oil & Gas Co. came suddenly to life as was noted last week and with the addition of another trio of tests raised its number of Hutchinson County operations to 18, all but 3 of which are at least as far along as building rigs.

The feature producing well of the Panhandle during the past week was a Gray County sensation, the Wilcox-Pampa Oil Co. having drilled its No. 3 Worley & Reynolds in Section 62, Block 3, into the granite wash at 2,975-87 feet, where it flowed 125 bbls. an hour and was making 6,594 bbls. the past 48 hours. The gravity is 42.3 degrees, corrected, and there is about 3,000,000 feet of gas with the oil. It was drilled in the last 7 feet about 7 a. m., June 5, after it had been flowing 80 bbls. an hour from 8 feet in the granite wash. This is the best granite wash well yet completed in the Panhandle.

Continental Oil Co.'s No. 1 Jackson, a Wheeler County old well deepened, flowed 120 bbls. in 24 hours from the granite wash, at 2,241-90 feet.

Hutchinson County Completions

Hutchinson County could not be denied its place in the calcium glare, of course, and Cockrell & McIlroy's No. 1 Smith in Section 14, Block Y, came through with the necessary punch. It was shot with 300 quarts from 2,907-3,006 feet and bridged but a short time, later broke through the bridge for a flow of 270 bbls. an hour. The McMan Oil & Gas Co. also contributed a good well in its No. 4 Smith, in the NW of Section 5, Block Y, which flowed 1,600 bbls. the first 24 hours after a shot of 160 quarts at 2,710-63 feet. The Phillips Petroleum Co. and Coble Oil Co.'s No. 2 J. A. Whittenburg in Section 13, Block Y, which was reported last week as starting off at the rate of 140 bbls. an hour, was completed for 2,000 bbls. initial after an 80-quart shot, 2,895-2,935 feet. The Phillips Petroleum Co. and Pulaski's No. 1 Smith-Capers, Section 12,

(Continued on Page 134)

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Testing 767 New Leases in Oklahoma

Half the Reported Operations Are On Heretofore Undrilled Tracts. New Pool In Township 9-6 Cut Off to East

By James McIntyre

One of the most significant things concerning operations in the Oklahoma Field at this time is that there are so many heretofore undrilled leases being prospected. In this week's reports from all the oil regions of the State including the real outside wildcats, in counties where no oil has ever yet been discovered, there is a total of 767 locations made, rigs up and wells drilling, each and all of which are first operations on leases. This means 767 new leases being, or to be, subjected to test. There is no preponderance of such new work in any particular district. The wells are scattered all over the oil producing regions of the State, as well as in the real wildcat districts. The total number of locations made, rigs up and wells drilling, either active or shut down, is 1,539 and just about half of this operating total is represented by work on new leases, indicating a very large amount of wildcat and semi-wildcat work in the State in an effort to keep up the production and to take advantage of a good price for crude.

The completions for the week developed few large wells and none of a very sensational character. The Garber deep sand and the Seminole country were the most interesting in the course of the week but the recently opened pool in Township 9-6 got a setback when the Amerada Petroleum Corp. drilled into a hole full of water in the same section in which the Indian Territory Illuminating Oil Co. opened the pool.

9-6 Pool Cut Off to East

In Township 9-6, Seminole County, where the Indian Territory Illuminating Oil Co. brought in a good well in the Hunton lime several weeks ago, the Barnsdall Oil Co.'s No. 1 Carter, SE cor. SE NW, Section 24-9-6, got sand at 3,823 feet and drilled to 3,842 feet. This well made 2,550 bbls. the first day and on Sunday produced 1,885 bbls. The same company's No. 2 Carter, NE cor. SE NW, Section 24, got sand at 3,929 feet and at 31 feet in was making 250 bbls on Sunday. It started at 50 bbls. an hour. The pool was given a hard blow when the Amerada Petroleum Corp.'s No. 1 James, C NW NE SE, Section 24 drilled into salt water at 4,060-63 feet. The hole filled with water. The 3,900-foot sand productive in the Barnsdall wells was missing in the Amerada test. It found gas at 4,019 feet. The Indian Territory Illuminating Oil Co.'s No. 1 Carter, C SW SW NE, Section 24, got sand at 3,935-53 feet. It made two flows of 51 bbls. each and the rig caught fire and was destroyed. The original well in the pool was the Indian Territory Illuminating Oil Co.'s No. 1 James, C NW NW SE, Section 24, which made 1,127 bbls. the first 24 hours from sand at 4,006-12 feet.

W. R. Ramsay's No. 5 Amos, SW cor. SE SE, Section 31-8-8, Wewoka deep sand area, Seminole County, is a 40-bbl. well at 4,008-25 feet.

Morgan & Flynn and the Amerada Petroleum Corp.'s No. 1 Alberty, NW cor. SW, Section 18-10-11, Okfuskee County, got sand at 3,541-54 feet and it flowed 126 bbls. the first 9½ hours.

The Dixie Oil Co.'s No. 5 Foster, SW cor. SE SW, Section 28-8-8, Seminole County, was a hole full of water at 4,203 feet and was plugging back to 4,000 feet.

Good Well By Deeper Drilling

J. H. Wright drilled an old well deeper, No. 1 Tahkaney, NW cor. SE, Section 24-17-10. Its old total depth was 2,487 feet. It was drilled to 2,495 feet and started at 140 bbls. an hour and at last report was holding up around its initial new production. The oil is 43 gravity. It was pumping 12 bbls. a day before being deepened. The Pioneer Petroleum Co.'s No. 6 Bucktrot, 600 feet north of the Wright well, started at 40 bbls. an hour from sand at 2,420-42 feet.

Progress in Garber

The Roxana Petroleum Corp.'s No. 9-L Schroeder, SW cor. SE SW, Section 18-22-3w, Garber Field, Garleld County, got sand at 3,045-52 feet and started at 2,294 bbls. The gravity of the oil was 47.3 degrees at a temperature of 74 degrees.

The Roxana Petroleum Corp.'s No. 1 Bunker, SW cor. NE, Section 29-23-4w, set pipe at 3,886 feet. The hole was cored to 3,904 feet and it filled up 2,500 feet with water. Marland Oil Co.'s No. 1 Chaffee, NW cor. SE, Section 19-23-3w, which was a 20,000,000-foot gas well at 4,141 feet, after a lot of hole trouble managed to drill by the pipe and set casing at 4,053 feet.

Burbank Field, Week Ending June 2

	No. Wells	Avr. Daily Prod. Bbls.
Lewis Oil Co.	17	854
Carter Oil Co.	282	5,434
Comar Oil Co.	7	101
Devonian Oil Co.	16	120
Mid-Continent Pet. Corp.	106	1,088
Gypsy Oil Co.	193	2,552
Kewanee O. & G. Co.	26	214
Laurel O. & G. Co.	16	139
Lorraine Pet. Co.	15	85
Midland Oil Co.	37	518
Mid-Kansas O. & G. Co.	42	875
Peters & Oliphant	3	550
Phillips Pet. Co.	202	10,705
Delmar Oil Co.	16	731
Phillips Pet. and Skelly Oil Co.	180	2,305
Prairie O. & G. Co.	127	3,104
Producers & Refiners	29	263
Roxana Pet. Corp.	54	547
Seemans et al	1	5
Simons & Moore	29	210
Sinclair O. & G.	144	1,356
Skelly Oil Co.	30	936
Tidal-Osage Oil Co.	42	479
The Texas Company	16	261
Twin State Oil Co.	24	336
Total	1,655	33,768
Kay County Extension of Burbank		
George Bole	3	187
Carter Oil Co.	11	898
Comar Oil Co.	17	1,080
Mid-Continent Pet. Co.	16	764
Gypsy Oil Co.	18	320
Laurel O. & G. Co.	5	121
Mid-Kansas O. & G. Co.	10	820
Phillips Pet. Co.	32	2,080
Prairie O. & G. Co.	4	87
Pure Oil Co.	4	205
Roxana Pet. Corp.	8	237
Dye & Tomlinson	8	239
Skelly Oil Co. and Phillips Pet. Co.	20	270
Sinclair O. & G. Co.	5	156
The Texas Company	16	139
Twin State Oil Co.	15	756
Total	192	8,359
Total Field	1,857	43,259
Average Daily Burbank Runs		Bbls.
Gulf Pipe Line Co.		7,112
Mid-Continent Pipe Line Co.		5,776
Osage Pipe Line Co.		2,045
Oklahoma Pipe Line Co.		11,384
Prairie Pipe Line Co.		8,144
Kay County Gas Co.		3,670
Sinclair Pipe Line Co.		434
Moore Refining Co.		66
Empire Pipe Line Co.		1,268
Ozark Pipe Line Co.		3,026
Texas Pipe Line Co.		334

The Roxana Petroleum Corp.'s No. 9-L Schroeder, SW cor. SE SW, Section 18-22-3w, Garber Field, Garfield County, started at 2,294 bbls. a day from sand at 3,045-52 feet. The Sinclair Oil & Gas Co.'s No. 34 Hartley, SW cor. NW, Section 18-22-3w, is an 800-bbl. well from sand at 2,698-2,718 feet.

Good and Bad Wells in Burbank

The Phillips Petroleum Co.'s No. 16, NE cor. Section 12-27-5, on one of the tracts bought at the last sale of Burbank leases, made 2,600 bbls. initial production from sand at 2,943-95 feet. Same company's No. 4, SE cor. SW, Section 7-27-5, was a 100-bbl. well after an 80-quart shot and at 2,954-96 feet and its No. 3, SW cor. SE NE, Section 12-27-5, was shot with 100 quarts and started at 100 bbls. The same company's No. 4, SE cor. Section 7-27-6, made 285 bbls. naturally the first 24 hours from sand at 2,926-90 feet. The Phillips Petroleum Co.'s No. 16, NE cor. SE, Section 20-26-6, started at 375 bbls. a day, following a 140-quart shot at 2,930-93 feet. The same company completed No. 16, NE cor. SW, Section 21-26-6, and it started off at 250 bbls. from sand at 2,930-86 feet, shot with 110 quarts. The Mid Kansas Oil & Gas Co. had three completions in the Burbank Field. No. 1 NW cor. Section 22-26-6, got sand at 2,942-78 feet, which was shot with 30 quarts. The hole filled 1,600 feet with oil. No. 2, SW cor. NW NW, Section 22, made 20 bbls. the first 24 hours after a shot at 2,931-43 feet. No. 4, SW cor. NW, Section 22, was dry and abandoned at 2,997 feet.

The Texas Company tested out the NE cor. SW, Section 29-25-8, Osage County, but it was a hole full of water and abandoned in the Burgess sand, 2,505-31 feet. The Carter Oil Co. drilled to 2,780 feet in No. 3, CEL SW, Section 26-24-8, Osage County, and abandoned the hole as a failure.

Another Good One in Bird Creek

Elliott & Smith's No. 23, NW cor. NE NW, Section 30-21-21, in the old Bird Creek Field, in an 800-bbl. well in the Wilcox sand at 1,957-2,040 feet. This oil is 51.4 gravity and commands a premium. They will drill No. 25 to the Wilcox sand in the NE cor. NW NW, Section 30.

Breene & Holm's test, NE cor. SE NE, Section 29-20-10, Osage County, was dry and abandoned at 2,180 feet. Sand Springs Home's No. 1, CSL SE NW, Section 33-20-11, was a hole full of water at 2,340 feet and was abandoned.

The Gypsy Oil Co.'s No. 18 Widener, SE cor. NE SE, Section 34-21-8, Pawnee County, is a 50-bbl. well at 2,483-95 feet and its No. 5 Norman, CSL NW NE, Section 35-21-8, Pawnee County, was good for 20 bbls. after a shot at 2,320-78 feet.

Late Lincoln County Wells

The Phillips Petroleum Co.'s No. 2 Hopewell, NE cor. NW SW, Section 8-15-6, Lincoln County, is a 950-bbl. well at 4,080-83 feet. Sinclair Oil & Gas Co.'s test on the Powers farm, NW cor. SW, Section 1-14-5, was dry and abandoned at 3,509 feet and the Magnolia Petroleum Co.'s No. 1 Davenport Townsite (Block 3) was a hole full of water at 3,440-58 feet and was abandoned.

640-Bbl. Well in 12-11

The Phillips Petroleum completed a 640-bbl. well in No. 1 Randall, NW cor. NE NE, Section 10-12-11, Okfuskee County, in sand at 2,640-48 feet.

Jolly & Ogg's No. 1-A Osborne, NE cor. NW, Section 21-15-14, Okmulgee County, which came in at 475 bbls. from sand at 2,276-82 feet, is now making 285 bbls. a day.

The Atlantic Oil Producing Co.'s deep test in No. 1 McIntosh, NE cor. Section 7-7-8, Seminole County, which was a hole full of water at 4,315-17 feet, was abandoned. Greis & Kerr's test on the Pearson farm, SE cor. NE NE, Section 30-7-8, Hughes County, was dry and abandoned at 3,500 feet.

The Pauline Oil Co.'s No. 1 Guhn, NE cor. SW NE, Section 11-2s-9w, Stephens County, was dry and abanooned at 2,894 feet.

Busy Holdenville Territory

The Sinclair Oil & Gas Co.'s No. 9 Yarborough, C SW NW NE, Section 4-10-8, Seminole County, found sand at 1,730-45 feet, which was shot with 10 quarts. It made 26 bbls. initial production. S. L. Robinson and Gibson & Zahnizer's No. 1 Severs, NE cor. NW SE, Section 35-11-9, Okfuskee County, showed 15 bbls. at 1,480-1,510 feet and was drilling below 1,700 feet; Independent Oil & Gas Co.'s No. 1 Ingram, C SW SW NE, Section 10-9-5, Seminole County, sand at 3,553-73 feet, 92 bbls. naturally. The Texas Company's No. 1 Brown, C SE SE NW, Section 10-9-5, sand at 3,554-75 feet, 63 bbls. naturally; Indian Territory Illuminating Oil Co.'s No. 1 Ida, C SW SW NE, Section 15-8-6, sand at 2,467-77 feet, 10,000,000 feet of gas and 5 bbls. an hour, not complete; Independent Oil & Gas Co. and Holm & Jarvis' No. 2, C SW SW NW, Section 8-9-8, sand at 3,300-25 feet, shot with 3 quarts and 5 quarts, 20 bbls.; Twin State Oil Co.'s No. 2, C NW SW SW, Section 8-9-8, sand at 3,279-3,301 feet, shot with 40 quarts, 70 bbls.; Roxana Petroleum Corp.'s No. 1 Aldridge, C NW SW NW, Section 17-9-8, sand at 3,362-94 feet, 15 bbls. naturally; Oklavania Oil Co.'s No. 1 Island, C NE NW SE, Section 18-9-8, sand at 3,257-87 feet, shot with 40 quarts, 100 bbls.; Shaffer Oil & Refining Co.'s No. 3, C SW NE NE, Section 18-9-8, sand at 3,286-3,316 feet, shot three times, made an 85-bbl. initial production; Coogan and others' No. 1, C SW SE NW, Section 32-8-11, Hughes County, sand at 1,681-95 feet, 3,000,000 feet of gas, drilling at 1,875 feet; LaSalle and others' No. 1, C NE NE SW, Section 28-5-5, Pontotoc County, sand at 1,702-17 feet, shot with 5 quarts, 25 bbls. F. C. Howarth's No. 1 Norris, a Hunton lime test, C SW SE NW, Section 14-4-7, Pontotoc County, was abandoned at 4,246 feet. This test had sand with a showing of oil at 712-48 feet; oil sand at 1,080-99 feet, a 20-bbl. showing at 1,091-99 feet; shale at 1,099-1,108 feet, water sand at 1,575-85 feet; set 8¼-inch casing at 2,200 feet; top of the Hunton lime at 3,748 feet; light brown lime at 4,221 feet.

Jack Lloyd and others' No. 4, SW cor. SE NW NE, Section 6-3-7, Pontotoc County, made 30 bbls. the first 12 hours after a 10-quart shot in sand at 1,150-93 feet, with a shale break at 1,188-90 feet.

The Superior Oil Corp.'s No. 1-A Noble, C NW NE NW, Section 15-9-6, Seminole County, was completed as a 30-bbls. well in sand at 2,616-27 feet, first oil at 2,626 feet.

The Josey Oil Co. and Margay Oil Co.'s No. 5-A Arbor, C SE SE NW, Section 1-9-9, was shot with 8 quarts in sand at 3,339-94 feet and it made a 300-bbl. initial production.

Holdenville Drilling

The Independent Oil & Gas Co.'s No. 1 Foster, NE cor. Section 25-11-9, Okfuskee County, present depth 3,047 feet, will be deepened; Mid Kansas Oil & Gas Co.'s No. 1 Berryhill, C NE NE NW, Section 35-11-9, rig on the ground; Amerada Petroleum Corp.'s No. 1, C SW NW NW, Section 36-11-9, spudded in; Minnehoma Oil Co.'s No. 1 Buck, C SW SW NW, Section 36-11-9, spudded in; Sinclair Oil & Gas Co.'s No. 1 Micko, C NW NW SW, Section 36-11-9, spudded in; Link Oil Co.'s No. 1 Stidham, C NW NW, Section 3-11-10, drilling below 300 feet; Independent Oil & Gas Co.'s No. 1, C SW SE SW, Section 16-10-9, drilling below 1,575 feet; Minnehoma Oil & Gas Co.'s No. 1 Walker, C NE NE SE, Section 17-10-9, set 10-inch pipe at 1,575 feet. J. W. McCulloch's No. 1 Carolina, C NE NW SE, Section 17-10-9, a rig; Southwestern Petroleum Co.'s No. 3 Peter, C SW SW SW, Section 18-9-8, Seminole County, rig up; Amerada Petroleum Corp.'s No. 4 Grayson, C NE

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SE SE, Section 32-8-8, drilling below 400 feet; Dixie Oil Co.'s No. 4 Long, C SW NE SE, Section 32-8-8, drilling at 300 feet; Independent Oil & Gas Co. and Continental Oil Co.'s No. 2 Long, C SE NW SE, Section 32-8-8, rig; same companies' No. 3 Long, C SW NW SE, Section 32-8-8, a rig. The Humble Oil & Refining Co.'s No. 2 Garner, C NE SE NE, Section 5-7-8, Hughes County, is spudding; Magnolia Petroleum Co.'s No. 5 Davis, C NE NE NE, Section 6-7-8, rig for twin wells.

The Champlin Refining Co.'s No. 8 Grayson, C NE SW, Section 22-11-11, Okfuskee County, drilling at 300 feet; same company's No. 7, SE cor. SW SW NW, Section 22-11-11, drilling below 400 feet; same company's No. 1-A Jefferson, SE cor. SW NW, Section 23-11-11, rig on the ground.

Nicholson Corporation's No. 5-B Kanard, CNL SE SE, Section 13-11-13, machine in.

In Township 10-6, Seminole County, where Searight and others recently brought in a well in the Hunton lime, in the SE cor. NE SE, Section 33-10-6, which started at 264 bbls. a day at 4,109-37 feet, the Prairie Oil & Gas Co.'s No. 1 Grayson, C NE SE SE, Section 33, was drilling at 2,009 feet; Carter Oil Co. and others' No. 1 Scott, C NW NW NW, Section 26, drilling at 400 feet; Carter Oil Co.'s No. 1 Stewart, SW cor. NW SW, Section 34-10-6, drilling at 1,200 feet; Mid-Continent Petroleum Corp.'s No. 1 Grayson, C NW SW SW, Section 34-10-6, drilling at 1,300 feet; Gardner Petroleum Co and Carter Oil Co.'s No. 1 Harjo, C NE SE SE, Section 35-10-6, drilling at 2,240 feet.

The Amerada Petroleum Corp. has a rig up for No. 1 Rentie, C SE SW NE, Section 23-9-6, Seminole County.

The Josey Oil Co. was drilling at 1,388 feet in No. 2, C NE SW NE, Section 22-9-9, Hughes County; Transcontinental Oil Co.'s No. 10 Harjo, C NE SE SW, Section 26-9-9, a rig; Tidal Oil Co. has a rig on the ground for No. 6 T. Baker, NE cor. SW SW, Section 3-9-11.

Kay County

The Harold Petroleum Co. abandoned No. 4 Case, SE cor. Section 4-27-1w, Kay County, on account of a bad hole at 1,750 feet. Same company's No. 3, NE cor. SE SW, Section 4-27-1w, which made 400 bbls. initial production from sand at 3,439-43 feet, was down to 180 bbls. a day and preparations were being made to deepen.

Kay-Noble County

The Marland Refining Co. was drilling at 300 feet in No. 6 North, SE cor. SE NW, Section 12-26-2w, and No. 7, NW cor. SW NE, Section 12, was drilling at 500 feet. The Arkansas Fuel Oil Co.'s No. 1 Moore, SW cor. Section 3-27-1w, was drilling at 450 feet. Magnolia Petroleum Co.'s No. 3 Sams, C SE NW SW, Section 15-21-1w, a rig.

Completions in Garber

Recent reports on completions and near completions in the Garber Field in Garfield County include the following: Mid-Continent Petroleum Corp. and Marland Oil Co.'s No. 18 Wishard, SW cor. SE, Section 12-22-4w, sand at 4,391-4,404 feet, shot at 4,396-4,404 feet, 70-bbl. pumper; same companies' No. 62 Walker, SE cor. Section 13-22-4w, sand at 3,599-3,604 feet, 487 bbls. initial production naturally, well not completed; No. 64 Walker, NW cor. NE SE, Section 13-22-4w, sand at 3,046-52 feet, 306 bbls. naturally, a completion; Sinclair Oil & Gas Co.'s No. 31 Walker, SW cor. NE NE, Section 13-22-4w, sand at 4,235-47 feet, 1,395 bbls. initial production, complete; No. 42 Walker, NW cor. SE NE, Section 13-22-42, sand at 2,728-50 feet, 650 bbls., not a completion; Franchot and others' No. 3 Lynds, SW cor. Section 7-22-3w, total depth 2,550 feet, plugged back to 1,440 feet, pumped 4 bbls., a completion; Roxana Petroleum Corp.'s No. 5-L Schroeder, NW cor. SW, Section 18-22-3w, sand at 3,047-72 feet, 750 bbls. initial production, completed; No. 7 Schroeder, SW cor. NW SW, Section 18-22-3w, sand at 2,775-86 feet, 206 bbls., completed; No. 8 Schroeder, NW cor. SW, Section 18-22-3w, sand at 2,526-35 feet, 150 bbls.; No. 11 Schroeder, SE cor. SW SE SW, Section 18-22-3w, sand at 2,188-95 feet, 312 bbls. of oil, 300 bbls. of water, initial production, not a completion; Sinclair Oil & Gas Co.'s No. 31 Hartley, SW cor. NW, Section 18-22-3w, sand at 3,670-92 feet, 1,435 bbls., a completion; No. 34 Hartley, SW cor. NW, Section 18-22-3w, sand at 2,698-2,718 feet, 800 bbls., completed; same company's No. 8-E Kisner, CWL NE, Section 19-22-3w, sand at 1,186-98 feet, swabbed 72 bbls. in 24 hours, not a completion; No. 26 Kisner, NE cor. NW NW, Section 19-22-3w, sand at 2,985-3,004 feet, 2,000 bbls. completed. Imo Oil & Gas Co.'s No. 7 McClean, SW cor. NW SW, Section 31-22-3w, sand at 2,220-40 feet, pumped 100 bbls. in 24 hours, completed.

New Work in Garber Field

The Sinclair Oil & Gas Co.'s No. 29-A Walker, SE cor. NE NE, Section 13-22-4w, was rigging up; No. 45 Walker, Section 13-22-4w, drilling at 1,770 feet; No. 48 Walker, drilling at 1,190 feet; No. 51 Walker, drilling at 907 feet; No. 52 Walker, drilling at 1,195 feet; No. 53 Walker, drilling at 1,665 feet; No. 54, spudded; No. 55, drilling at 511 feet; No. 56, SW cor. NE NE, Section 13, rigging up; No. 60, SE cor. SW NW, Section 13, rig on the ground.

Roxana Petroleum Corp.'s No. 2-L Schroeder, NW cor. SW SW, Section 18-22-3w, drilling at 3,235 feet, old well drilling deeper; No. 4-L Schroeder, drilling at 1,685 feet; No. 9-A Schroeder, drilling at 1,686 feet; No. 11-L Schroeder at 1,604 feet.

Sinclair Oil & Gas Co.'s No. 41 Hartley, Section 18-22-3w, drilling at 2,309 feet; No. 42, abandoned and rig skidded 75 feet north, NE cor. SW NW, Section 18-22-3w; No. 43, drilling at 1,324 feet; No. 44, at 1,740 feet; No. 45 Hartley, SE cor. NW NW, Section 18-22-3w, a rig; No. 46 Hartley, NW cor. NE NW NW, Section 18-22-3w, drilling at 1,035 feet; No. 50 Hartley, C NE SW NW, Section 18-22-3w, rigged up; No. 12 Kisner, NW cor. NE NW, Section 19-22-3w, drilling at 2,057 feet; No. 30 Kisner, drilling at 2,382 feet; No. 31 Kisner, SE cor. NW NW, Section 19-22-3w, a rig. Champlin Refining Co.'s No. 3-A Allen, NE cor. NW NW NE, Section 21-22-3w, drilling at 400 feet; Imo Oil & Gas Co.'s No. 1 Woods, NE cor. NW NW, Section 6-21-3w, rig.

Okmulgee Field Results

L. R. Page and others' No. 1, SE cor. SW NW NE, Section 19-15-13, Beggs district, Okmulgee County, showed a 40,000,000-foot gas production at 2,170-75 feet and an 80,000,000-foot gas production at 2,205 feet. Water broke in at 2,206 feet. Pipe was to be set at 2,235 feet and the crew was mudding off the gas. Vincent and others' No. 1 Anderson, C SW SE NE, Section 3-15-14, Bald Hill district, got sand at 1,515-23 feet which was shot with 30 quarts. It made a 35-bbl. showing and was being cleaned out; J. L. Selby's No. 5 Osborne, CSL NE SE, Section 21-15-14, was shot in sand at 1,656-79 feet and made 25 bbls. the first day. E. T. McDowell and others' No. 1 Lovett, NW cor. SW SE, Section 14-14-13, showed a 15,000,000-foot gas production at 1,922-31 feet. It was to be mudded off. J. J. Shock and others found 1,000,000 feet of gas in sand at 1,897-1,942 feet and water at 1,960 feet. The gas was to be mudded off. Aksarben Oil Co.'s No. 9 Harris, SW cor. SE SE NE, Section 1-14-14, sand at 1,130-40 feet, shot with 40 quarts, 10 bbls., a pumper; F. D. Misener's No. 8 Colbert, CSL SW SW, Section 16-14-14, sand at 790-814 feet, shot with 120 quarts, 15 bbls.; Link Oil Co.'s No. 6 Sango, SE cor. NE, Section 29-15-15, sand at 1,742-1,800 feet, shot with 15 quarts, 8 bbls. Over in Muskogee County C. U. Bradley's No. 2 Goodrich, SE cor. NW SW, Section 5-14-19, got sand at 688-96 feet, shot it with 20 quarts and the well started at 10 bbls.; Cal Cul Oil Co.'s No. 7 Doyle, NE cor. NW SE SW, Section 15-13-14, sand at 1,114-31 feet, dry, plugged back to sand at 715-805 feet, 2,000,000-foot gas well, completed; Clarion Oil Co.'s No. 1 McKinley, SE cor. SW SE, Section 27-13-14, sand at 2,594-2,606 feet, 2-bbl. showing; plugged back to sand at 1,899-1,905 feet for a shot; J. H. Rebold's and Gypsy Oil Co.'s No. 3 McKinley, SE cor. NW SE, Section 1,535-1,608 feet, shot with 70 quarts, 10 bbls. C. F. Noble's No. 5 Sellee, NW cor. SW, Section 3-15-11, made a 20-bbl. initial production after a shot in sand at 1,911-65 feet. M. C. French shot his No. 3, SE cor. SW NE, Section 17-11-12, in sand at 1,614-90 feet and it made 3 bbls. This well had been drilled to 3,021 feet and plugged back. It is not yet a completion.

Okmulgee Drilling

Thompson & Black were drilling below 600 feet in No. 1 Phillips, SE cor. NW, Section 19-15-13. This is to be a deep test.

The Ozark Drilling Co.'s No. 1, SW cor. Section 31-15-19, Muskogee County, was drilling below 250 feet. O. J. Stout's No. 2 Hutton, SE cor. NE NE, Section 28-13-15, is rigged up.

The Iron Mountain Oil Co.'s No. 7-B Grant, CWL SW NW, Section 3-15-11, is a rig on the ground; E. F. Hammond's No. 3 R. Douglas, NW cor. SE NW, Section 35-15-12, rigging up; Gray Oil Co.'s No. 1 S. Tiger, SW cor. SE SW, Section 33-15-13, rig building; Payne and others' No. 1-A Francis, SW cor. Section 15-15-14, rig on the ground for twin; Jolly & Ogg's No. 4 Alexander, CEL SE SW, Section 16-15-14, moving in machine; The Texas Company's No. 4 Alexander, SW cor. SE, Section 16-15-14, rigged up; Jolly & Ogg's No. 6. CNL NE NW, Section 21-15-14, machine in; The Texas Company's No. 13 S. Garrett, NW cor. NE, Section 21-15-14, spudded in; Sinclair & Collett's No. 9-A Franklin, NE cor. SE, Section 31-15-14, rigged up; F. D. Misener's No. 9 S. Colbert, SE cor. SW SW SW, Section 16-14-14, drilling below 500 feet; Perkins and others' No. 12-A Sadler, NW cor. SE NE, Section 20-14-14, drilling below 750 feet.

E. A. Hutchinson has a rig up for No. 1-A Mayson, SE cor. NW NE, Section 31-15-15.

J. W. Foltz is drilling below 1,700 feet in No. 3 Taylor, C SW SE, Section 28-15-17, Muskogee County. Dreley & Slusher have rig on the ground for No. 2 Dean, SE cor. Section 21-14-17, same county.

J. A. Swindler has rig on the ground for No. 8 Lewis, NE cor. SW NE, Section 25-13-11, Tiger Flats district, Okmulgee County. J. H. Rebold's No. 1 Jones, CNL NE NW, Section 27-13-11, is drilling at 600 feet.

The McCullough Oil Co.'s No. 4 Sarger, SE cor. NW SW, Section 16-13-13, is rigged up; Cusack and others' No. 2-A Wiley, CNL SW NE, Section 29-13-14, machine.

Creek County Very Active

Mann & Bartlett's No. 2 Noble, CEL SE NW, Section 5-19-8, Mannford district, Creek County, got sand at 1,996-2,018 feet, shot it with 40 quarts but it pumped off after having pumped 225 bbls. The crew was pulling tubing to locate the trouble. Burlingame & Sharp's No. 6 Unallotted, CWL SW NW, Section 13-19-8, 480 bbls. naturally the first 24 hours from Bartles sand at 2,398-2,422 feet; the Gled Oil Co.'s No. 3 Ross, CSL SE SW, Section 13-19-8, 75 bbls. initial production, following a 140-quart shot at 2,220-83 feet. Magnolia Petroleum Co.'s No. 2, SW cor. SE, Section 32-18-7, Olive district, an old well drilled deeper, is a 60-bbl. well at 2,698-2,717 feet. The Red Bank Oil Co.'s No. 2 Postoak, SW cor. NE SW, Section 23-19-10, sand at 1,810-56 feet, shot with 200 quarts, 72 bbls., very slightly cut; Twin State Oil Co.'s No. 1 Hickory, SW cor. SE SE NW, Section 23-19-10, sand at 1,793-1,834 feet, shot with 150 quarts, 21 bbls. initial production, the oil slightly cut. In the Shamrock Field, Gibson & Baker's No. 1-A Millie Tiger had a showing in sand at 1,572-81 feet; Transcontinental Oil Co.'s No. 1-A Mitchell, SE cor. NE SW, Section 22-17-8, was shot with 60 quarts and made 65 bbls. of oil and 20 bbls. of water the first 24 hours. The Interocean Oil Co. and McCullough's No. 3 Big Pond, NW cor. SE NE, Section 27-17-8, made 435 bbls. the first 24 hours

(Continued on Page 112)

FEW IMPORTANT COMPLETIONS BUT MUCH NEW WORK STARTED IN KANSAS

By James McIntyre

The past week in review in Kansas was productive of few important completions, but the number of new operations started was greater than usual. The north end of Greenwood County and the south end of Lyon County was very active in new work, especially in the new Atyeo area

Unsuccessful Tests

Double A Oil Co.'s No. 1 Chatterton, C SE SE NW, Section 11-17-12, Lyon County, was dry and abandoned at 2,118 feet.

McMahon & Leonard's No. 1 Jones, C SW SE NW, Section 5-19-14, Coffey County, was dry and abandoned at 1,786 feet.

Bason and others' No. 1, C SW SW NW, Section 26-20-13, was dry and abandoned at 2,175 feet.

Greenland and others' No. 1, NE cor. Lot 2, Section 31-23-8, Butler County, was abandoned as dry at 2,760 feet.

Completions in Greenwood

The Phillips Petroleum Co. drilled a failure in No. 3 Cragan, C NE SE NW, Section 4-23-11, Greenwood County, at 2,028 feet and the well has been abandoned. The Skelly Oil Co.'s No. 2 Yeager, C NW NE NW, Section 4-23-11, was shot with 160 quarts of explosive in sand at 1,880-1,915 feet and started at 60 bbls. a day. T. K. Simmons' No. 1 Marlar, C NW SW NW, Section 3-23-12, was abandoned as dry at 1,875 feet. Braden Brothers & Darby's No. 5, C NW NE NE, Section 27-22-13, started at 15 bbls. after a shot in sand at 1,821-58 feet. Darby and others' No. 1, C SE SW NW, Section 8-22-14, was abandoned as dry at 1,760 feet. The Mid-Continent Petroleum Corp.'s No. 4, NE cor. SE NE, Section 28-23-13, got sand at 1,713-49 feet, which was shot with 40 quarts and it made a 25-bbl. initial production. The same company's No. 5, C SW NE NE, Section 28-23-13, shot sand at 1,703-19 feet with 60 quarts, the well responding with a 35-bbl. production.

Shallow Wells in Old Pool

The Empire Gas & Fuel Co. completed a batch of wells in the shallow pay in the Wilson district north of Eldorado, Butler County. Its No. 89 Hegberg, SE cor. SW NW, Section 28-25-5, 8 bbls. at 648-670 feet; No. 34, SE cor. NW SW, Section 28-25-5, 5 bbls. at 642-660 feet; No. 32, NW cor. SE SE, Section 28, 7 bbls. at 142-662 feet; No. 49, CSL SW NW, Section 32-25-5, 8 bbls. at 652-666 feet; No. 69 Pierpont, CSL NW Section 33-25-5, 4 bbls. at 616-26 feet. All the wells were given small shots.

Near the Woodson-Greenwood County line J. B. Kirk and others abandoned No. 1, SW cor. SE NW, Section 6-25-14, at 1,689 feet. It was dry.

Results in Butler County

In Butler County, the Phillips Petroleum Co.'s No. 1 Tatum, C SW SW, Section 9-27-6, was completed. It is good for 20 bbls. of oil, but it also produces 20 bbls. of water a day from sand at 3,150-56 feet. The Magnolia Petroleum Co.'s No. 4 Skaer, NW cor. SW NW SW, Section 25-27-4, North Augusta Field, is good for 20 bbls. from sand at 2,026-65 feet. Safford and others' No. 7, C NE SE SW, Section 26-27-4, got sand at 2,014-50 feet and the well started at 60 bbls. a day.

The Peerless Oil Co.'s No. 2, C SW NE NE, Section 23-26-14, Woodson County, found sand at 1,208-77 feet, which was shot with 120 quarts. It started at 300 bbls. of 21.2 gravity oil.

The Theta Oil Co.'s No. 1, C SW SW

(Continued on Page 108)

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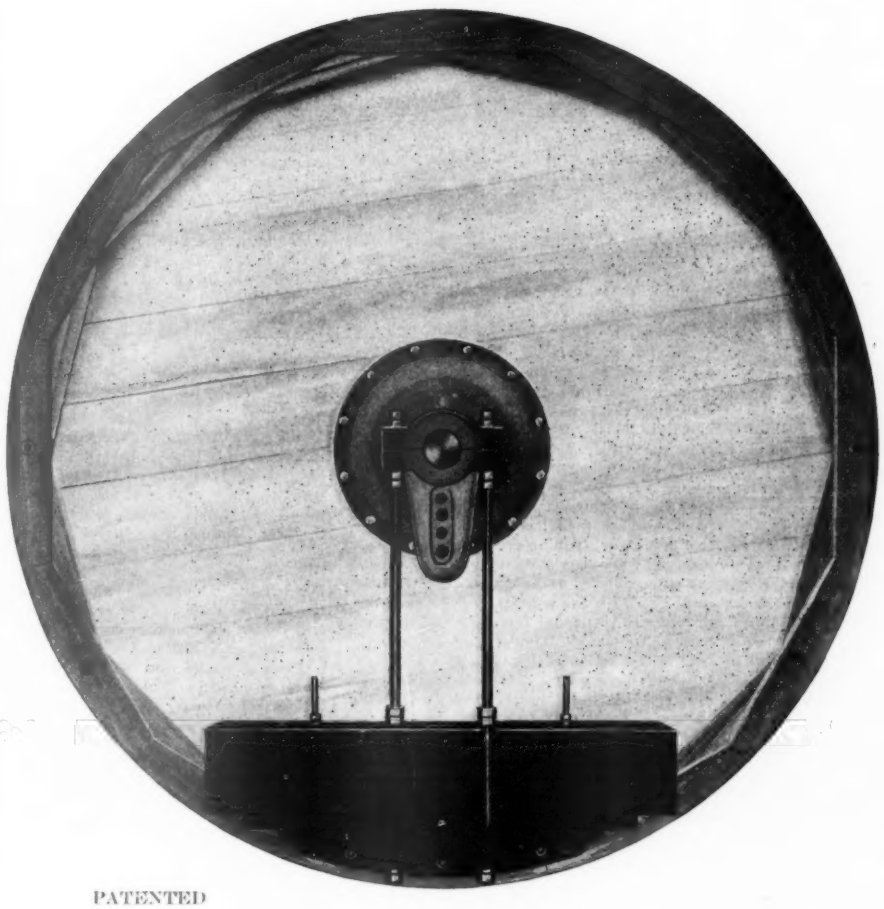

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Monroe Gas Field Extended Six Miles

Three Deep Sand Tests, One in Arkansas and Two in Louisiana, Failures and Condemn Considerable Territory

By James H. Dameron
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., June 7.—Failures of deep tests in both states and the extension of the great Monroe Gas Field 6 miles to the west were among the field developments of importance in the Louisiana-Arkansas district in the week just closed.

Sam D. Hunter's No. 1 D'Arbone, Section 32-19-3e, extended the Monroe Field. It gauged 2,700,000 feet of gas at a total depth of 2,220 feet. The extension of the field did not come as a surprise to operators in that field. The well is in Ouachita Parish and 6 miles west of production and across the Ouachita River.

Three deep sand failures, one in Arkansas and two in Louisiana, condemned more territory. In Arkansas, the deep failure was Moorefield and associates' No. 1 on the Edwards farm, Section 2-19-18, Union County, which was given up at 3,015 feet without a trace of oil showing. The test is 14 miles southwest of the El Dorado Field.

Louisiana's deep failures were both in DeSoto Parish. One was Ohio Oil Co.'s test on the Mrs. Evelyn Cody farm near Logansport. It was drilled in the NE SW NW, Section 34-12-16, and was dry at 3,020 feet. The hole was drilled on what is known as the Carthage anticline and is west of the Bull Bayou Field. The second failure was L. V. Ulrey's No. 1 Heard, NW NE, Section 18-12-12, northwest of the Ohio Oil Co.'s test. It had a light showing of oil at 2,666 feet but was abandoned at that depth.

An interesting 3,000-foot test has been started in Union County, Arkansas, by the recently organized Calgo Oil Co. It is No. 1 Primm, NW NE NE, Section 9-18-17, 2 miles east of Shuler and 9 miles west of production. The directors of the new company are D. S. Brooks, D. P. Hamilton, H. N. Spafford and J. I. Gillespie.

Lisbon Quite Active

Due to the many completions in Lisbon, Union County finished the week with 25 completions. First reports in that county exceeded the completions by one. At the close of the week, Union County had 14 wells waiting for standard rigs, 58 tests drilling, 17 rigged up and ready to start, and 34 derricks in the fields.

Lisbon brought in more than 2,000 bbls. of new production with its completions, most of which were inside wells. H. L. Hunt's No. 1 Murphy, SW NW NE, Section 4-17-16, apparently has determined the field's northern limits. A shot was put off in the sand and after the hole had been cleaned out the well made 8 bbls. on the pump the first six hours and was pumped down.

Sixteen cars of Smackover crude and one car of gasoline were destroyed by fire when the cars, part of a 44-car oil train, derailed and exploded near Strong, Ark., last Wednesday. E. K. Hargrave, Missouri Pacific Railroad brakeman, died from burns suffered when the fuel ignited. The loss of the crude and gasoline and equipment was estimated at $50,000.

The Simms Oil Co. owned the crude and tank cars and the Natural Gas & Fuel Corp. owned the car of gasoline. Cause of the derailment was not determined. The remainder of the oil train was pulled away to safety when the 17 cars started burning.

Another fire in the heart of the Urania Field again threatened destruction on more than a score of leases and to the town of Tullos, when the Explorers Oil Corp.'s No. 1 Gehara, Section 25-10-1e, a 100-bbl. pumper, caught fire from an undetermined origin. The well is in the heart of the Tullos townsite where many rigs are in some places only a few feet apart. Derrick and equipment of the well was destroyed before the fire was extinguished.

A fire hose and pump on the adjoining lease of Louie Hamilton was brought into play and prevented the spreading of flames. Several weeks ago a section of Tullos was destroyed by fire. Just a few days ago the Missouri Pacific Railroad completed repairs to a long trestle near Rochelle that was badly damaged by a Urania oil fire.

Interest Around Extension

Practically all of the new work and interest in Urania centers around Montague Oil Co.'s extensioner in Section 11. The company has a derrick up for an offset and several other locations are being made by operators with acreage in that immediate area. Oil operators in the field are aiding the parish road officials in building a new road to that sector. The parish will build bridges and maintain the road.

It is reported the Natural Gas & Fuel Corp. has purchased the NW NE, Section 35-10-1e, as a tank farm site from the Urania Lumber Co. According to reports the corporation plans the immediate construction of a 55,000-bbl. tank and later another tank of similar capacity.

The corporation will also lay gathering lines in the field and build a centrally located treating plant to treat oil for pipelines. The corporation is one of the major producers in the Urania Field.

Another Trinity Producer

In Caddo Parish, little happened aside from routine work. Another Trinity horizon producer was added by the Gulf Refining Co.'s No. 17 Lane, Section 13-21-15. After several days of constant battling drillers killed the big gas flow in Gulf's No. 12 Tyson, Section 14-21-15, at 3,746 feet and are running a 3-inch drill stem in the hole to drill deeper. Ohio Oil Co.'s No. 18 Smith, Section 12-21-15, missed the big gas-producing horizon when it was plugged back from 3,973 feet to 3,772 feet.

Along the Caldwell-Angelina flexure another failure was drilled when Humble Oil & Refining Co.'s No. 3 L & A, Section 3-9-2w, Grant Parish, hit salt water at 1,517 feet.

Production in both States fell off almost 3,000 bbls. daily during the seven-day period. Louisiana dropped 3,600 bbls., while Arkansas gained 850 bbls. The big drop in Louisiana's output came from the 3,000-bbl. decline in Urania, when heavy producers in that field declined rapidly. The Hope Oil Co.'s gusher which came in making 3,000 bbls. and produced a little better than 21,000 bbls. the first week, is now making 1,000 bbls. daily. New production in the field failed to offset the decline. Haynesville and Elm Grove were the only two fields in Louisiana showing gains.

In Arkansas the 2,000-bbl. gain in El Dorado and the 1,000-bbl. climb of Lisbon offset the 2,000-bbl. fall in Smackover heavy. Smackover light fell off some while Nevada and Stephens Fields showed slight gains.

PRODUCTION BY FIELDS

Louisiana

Bellevue	2,390
Caddo, light	10,545
Caddo, heavy	2,955
Cotton Valley	8,650
De Soto and Red River	4,060
Elm Grove	630
Haynesville	10,200
Homer	5,710
Urania	16,295
Total	61,435

Arkansas

Smackover, heavy	132,440
Smackover, light	17,105
El Dorado	9,345
Lisbon	11,160
Nevada	3,100
Stephens	2,000
Total	175,150
Total both fields	236,585
Total last week	239,420
Difference	2,835

Union County

Union County went out of the ordinary when 25 wells were completed within her borders last week with only one failure to smear the slate. Nineteen of the completions were at Lisbon which added more than 2,000 bbls. to its production during the week.

The best completion came from the north end of the Lisbon Field although the border wells were small producers. The big well was Magnolia Petroleum Co.'s No. 1 Harrell, Section 4-17-16, which came in flowing 480 bbls. from sand at 2,095 to 2,132 feet. Farther north, Allday Drilling Co.'s No. 1 Murphy, Section 4-17-16, made 75 bbls. from sand at 2,132-56 feet when put on the beam. In the south end, Atlantic's No. 3-B Andress, Section 16-17-16, is pumping 30 bbls. from sand at 2,124-47 feet. Its No. 2 Graham, Section 16-17-16, is doing 30 bbls. on the pump from sand at 2,101-26 feet.

Bond & Evans' No. 3 Kilgoe, Section 4-17-16, made 25 bbls. on the pump from sand at 2,120-60 feet. Humble Oil & Refining Co.'s No. 2 Goodwin was finished at 2,096 to 2,122 feet, making 150 bbls. naturally. Offsetting its southern extensioner, Imperial Oil & Gas Co.'s No. 2 Primm, Section 21-17-16, is making almost three times as much oil as No. 1 did. It is flowing 73 bbls. daily through 2-inch tubing from sand at 2,150-82 feet. To the west, Long and associates completed their No. 2 White, Section 17-17-16, for a 500,000-foot gas well producing from 50 feet of broken formation topped at 2,080 feet. Magnolia's No. 8 Slaughter, Section 9-17-16, was finished in sand at 2,098 to 2,122 feet flowing 150 bbls. daily, and No. 9 on the same lease was completed for a similar amount in 30 feet of sand topped at 2,106 feet.

Natural Gas & Fuel Corp. finished a brace of wells. No. 5 Andress, Section 16-17-16, is flowing 60 bbls. from sand at 2,136-58 feet and No. 1 Willet, Section 4-17-16, swabbed and flowed 127 bbls. the first 12 hours in sand at 2,115-34 feet. Ohio Oil Co.'s No. 2 Goodwin, Section 21-17-16, is pumping 45 bbls. from sand at 2,100-30 feet. Owens and associates' No. 5 Slaughter, Section 4-17-16, is in sand at 2,115-62 feet and flowing 225 bbls. daily. Pure Oil Co. completed three on its Lisbon leases. No. 2 Slaughter, Section 4-17-16, for a 50-bbl. pumper from sand at 2,112-52 feet while No. 3, same lease, came in at 2,100-35 feet making 400 bbls. naturally, and No. 4 Dumas, Section 9-17-16, pumped 45 bbls. from 2,088 to 2,128 feet. Rovenger Oil Corp.'s No. 8 Graham, Section 16-17-16, is pumping 45 bbls. from sand at 2,103-32 feet and Simms Oil Co.'s No. 4 Perry, Section 16-17-16, is making 30 bbls. on the pump from sand at 2,080 to 2,100 feet.

Lisbon Still Active

Unlike Urania in Louisiana, Lisbon's field operations continue at the rapid pace set several months ago. Allday Drilling Co.'s No. 2 Murphy, 150 feet north, 585 feet west SE SW NE, Section 4-17-16, is a derrick. On the Atlantic Oil Producing Co.'s Andress "B" lease, Section 16-17-16, No. 5 has 700 feet of oil in the hole from broken sand at 2,109-43 feet and is waiting for a standard rig; the liner is being bailed at No. 6 which has 600 feet of fluid in the hole from sand at 2,124-59 feet; No. 8 is rigged up and ready to go. Derricks have been built for No. 4, SE NW SW, and No. 5, NE SW SW, on the Atlantic's Goodwin lease, Section 16-17-16, and the liner is being set to test 34 feet of broken sand topped at 2,113 feet at No. 8 Goodwin.

Hickman and associates' Lisbon deep test, No. 1 Slaughter, Section 3-17-16, is drilling below the 2,830-foot level. On the Humble Oil & Refining Co.'s Goodwin lease, Section 16-17-16, No. 4 is a derrick; No. 5 is in sand at 2,134-55 feet with 500 feet of oil in the hole and waiting for a standard rig, and No. 6 Goodwin, 990 feet south and 330 feet east NW cor. NE SW, is rigged up and ready to start. Humble's No. 3 Slaughter, Section 10-17-17, is drilling at 1,350 feet. A shot put off in the sand helped H. L. Hunt's No. 1 Murphy, Section 4-17-16, and the test is waiting for a pumping rig and has 700 feet of fluid in the hole. Hunt's No. 5 on the same lease has spudded. Imperial Oil & Gas Co.'s No. 1 Goodwin, Section 26-17-16, is shut down at 998 feet while the rig is being repaired. J. P. Kelly's No. 1 Mitchell, Section 20-17-16, is to be put on the beam and is shut down at 2,174 feet waiting for a standard rig.

A rig is up for Lion Oil & Refining Co.'s No. 9-A Mitchell, NE NE SE, Section 17-17-16. Magnolia's No. 2 Dumas, Section 9-17-16, is rigged up and ready to start drilling; No. 5 Dumas has 500 feet of oil in the hole from 40 feet of broken sand topped at 2,080 feet and is waiting for a standard rig. A derrick is up in the NW NE SE, Section 4-17-16, for Magnolia's No. 2 Harrell and another derrick is standing for No. 3 Harrell, SE cor. NE SE, Section 4-17-16. Surface casing was set at 254 feet at Magnolia's No. 6 Slaughter, Section 9-17-16, and 6-inch casing was cemented at 2,070 feet at No. 7 Miller & Cottingham's No. 6 Slaughter, Section 9-17-16, drilling at 1,800 feet. Derricks are up for Natural Gas & Fuel Corp.'s No. 2 Willett, SE SE NE, Section 4-17-16, and for No. 3, CWL SE NE, same section. Ohio Oil Co.'s No. 4 Goodwin, NE cor. SW NW, Section 21-17-16, is rigged up and ready to go.

Drilling Operations

Pure Oil Co.'s No. 1 Harrell, Section 4-17-16, is drilling below the 1,100-foot level, and a rig is up for No. 2 Harrell, SE NW SE, same section, and No. 3, NE NW SE, is a derrick as is No. 4, SE NW SE. Pure's No. 4 Slaughter, Section 4-17-16, is waiting for casing to set at 2,105 feet. A derrick is standing for Reynolds & Marr's No. 1 Goodwin, NE cor. Section 21-17-16, and No. 2 Goodwin, NW NE NE, is a derrick. Their No. 1 Mooty, Section 22-17-16, is in sand at 2,147-82 feet with 200 feet of oil in the hole and is waiting for a standard rig. Six and five-eighths inch casing was cemented at 2,080 feet at Rovenger Oil Corp.'s No. 5-A Goodwin, Section 16-17-16. Rovenger's No. 2 Harrell, Section 15-17-16, is drilling at 1,000 feet and a derrick is up for No. 3 Harrell, C NW SW, same section.

Roxana's No. 5 Flournoy, Section 4-17-16, is being swabbed to test sand at 2,095 to 2,127 feet. On the Simms Oil Co.'s Perry lease, Section 16-17-16, three wells are waiting for power so they can be put on the pump. No. 5 has 300 feet of oil in the hole from sand at 2,080 to 2,120 feet; No. 6 has a similar amount of oil from sand at 2,078 to 2,103 feet and No. 7 has 300 feet of oil in the hole from sand at 2,070 to 2,110 feet. No.

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8 Perry is rigged up and ready to start drilling. Southern Crude Oil Purchasing Co.'s No. 2 Slaughter, Section 3-17-16, has 250 feet of oil in the hole from sand at 2,088 to 2,107 feet and is waiting for a standard rig; Southern's No. 3 Slaughter is a rig. Wingfield and associates' No. 3-A Slaughter, Section 9-17-16, is in 30 feet of sand topped at 2,086 feet with 600 feet of oil in the hole and waiting for a standard rig. Their No. 4-A Slaughter has 500 feet of oil in the hole from sand at 2,073-98 feet and is waiting for standard rig, and No. 1-B Slaughter, Section 3-17-16, is drilling at 1,620 feet.

Smackover Field

In the Smackover area, Gulf Refining Co.'s No. 17 Alphin, Section 2-16-16, is being produced with compressed air and is making 3,000 bbls. of fluid daily, 95 per cent salt water, from sand at 2,681-84 feet. Gulf's No. 2 Clawson, Section 14-16-15, is making 180 bbls. of fluid, 40 per cent oil, from sand at 2,685-88 feet; Imperial Oil & Gas Co.'s No. 8 McClanahan, Section 6-16-15, is making 20 bbls. on the pump from sand at 2,548-55 feet. Moorefield and associates' No. 1 Edwards, Section 2-19-18, was a failure at 3,015 feet and has been abandoned. Peer Oil Co.'s No. 5 Palmer, Section 9-16-15, is pumping 125 bbls. daily, 5 per cent salt water, from 2,489-91 feet. Sinclair Oil & Gas Co.'s No. 8 Flenniken, Section 6-16-15, is pumping 100 bbls. of fluid, 40 per cent salt water, from 2,569-73 feet.

F. A. Brooks' No. 1 McDonald, Section 1-16-16, is drilling at 250 feet. Broderick & Calvert's No. 7-B Murphy, Section 8-16-15, cored a gas sand at 2,687 feet and 4½-inch casing is being set to make a test. Six-inch casing was set at 2,593 feet at G. J. Child's No. 3 fee, Section 8-16-16. Clark & Greer's No. 3 Robinson, Section 6-18-15, has 150 feet of oil in the hole from sand at 2,131-45 feet and is waiting for a standard rig. Sam Cook's No. 8 Tatum, Section 7-16-15, an old well drilled deeper, has 700 feet of oil in the hole from sand at 2,561-63 feet and is to be put on the beam. Crestline Oil Co.'s No. 1 Telford, Section 34-17-15, is being cleaned out at 2,224 feet. Eason and associates' No. 8 Murphy, Section 15-16-15, tested salt water at 2,612 feet and the hole is being plugged back to 2,608 feet in an effort to save a well. No. 9 Murphy, same section, is rigging up. Drillers are fishing for the drill stem at 1,200 feet at Federal Petroleum Co.'s No. 3 Murphy, Section 15-16-15, which is down 2,600 feet.

Other Operations

Surface casing was set at 138 feet and Garret and associates' No. 1 Ford, Section 30-19-14, is drilling at 612 feet. Salt water sand was cored at 2,655-59 feet at Gaughan & Sifford's No. 1 Parks. Grimes & Jones' No. 1 Alphin, Section 6-18-14, is a rig. Gulf's No. 21 Murphy, 2,060 feet north and 200 feet west SE cor. Section 9-16-15, is a rig. Hickman and associates' No. 1 Slaughter, Section 3-17-16, is drilling at 2,830 feet. Hollyfield and associates' No. 13 Giller, Section 10-16-15, is drilling below the 2,050-foot level. Howell & Knowles' No. 2 Springer, Section 36-17-16, cored 1 foot of sand topped at 2,558 feet and 4½-inch casing is being set. Six and five-eighths inch casing is being sidetracked at 1,875 feet at Humble Oil & Refining Co.'s No. 6-B Flenniken, Section 9-16-15. Humble's No. 2-B Lawton, Section 7-16-15, tested salt water in sand at 2,635-53 feet and is drilling ahead in sandy shale around 2,673 feet. H. L. Hunt's No. 2 Swilley, Section 28-16-16, is drilling at 2,578 feet and No. 3 has been rigged up. A derrick pattern is on location for E. M. Jones' No. 1 Foster, NE cor. SE, Section 19-16-16, and for his No. 1 Lawrence, NE SW NE, Section 29-16-16. Jones & Murphy have a derrick up for No. 1 McDonald, NE NW SE, Section 27-19-16. Lion Oil & Refining Co.'s No. 1 Coombs, Section 25-18-16, is boring through shale at 2,634 feet and Lion's No. 8 Flenniken, Section 10-16-15, is drilling at 2,680 feet.

A rig is up for Lion Oil & Refining Co.'s No. 9 Mitchell, NE NE SE, Section 17-17-16. Magnolia Petroleum Co.'s No. 4 Tatum, Section 7-16-15, tested salt water at 2,130 feet and is shut down for orders. Oil-bearing sand was cored at 2,625-28 feet at Magnolia's No. 5 Tatum, same section, and 6⅝-inch casing is being set on top of the sand for a test. A derrick is up for No. 6 Tatum, CWL E half NE NW. The bit and collar were lost at 2,592 feet at Magnolia's No. 1 Childs, Section 8-16-16. Magnolia's No. 2 M. J. Scott, NW cor. NE NW, Section 12-16-17, is a derrick. McGaha and associates' No. 1 Haney, Section 11-17-16, is being washed to the bottom at 2,536 feet. Murdock and associates' No. 8 Hays, Section 4-16-15, is drilling at 1,025 feet. Same operators are sidetracking casing at 2,712 feet at No. 7 Vestal, Section 17-16-15.

Natural Gas & Fuel Corp.'s No. 1 Carey, Section 17-16-15, is a rig. A. H. Ramage's No. 1 fee, Section 27-16-16, is drilling below the 600-foot level, and his No. 6-C Lawton, Section 10-16-15, is to be put on the pump at 2,609 feet. C. L. Saxon's No. 1-B Saxon, Section 9-16-16, picked up only a light showing of oil at 2,333 feet and formations are being cored at 2,612 feet. Simms Oil Co.'s No. 2-A Murphy, Section 15-16-15, is drilling at 714 feet. A derrick is up for Southern Crude Oil Purchasing Co.'s No. 4-A Wells, SW NE NW, Section 15-16-15. While grinding through hard lime the drilling stem was twisted off at 2,484 feet and 43 joints of the stem lost in the hole at Standard Oil Co.'s No. 11 McClannahan, Section 6-16-15. Six and five-eighths inch casing was cemented at 2,568 feet at Sunny Jim Oil Co.'s No. 7-A Lawton, Section 10-16-15. Sun Oil Co.'s No. 9 Brown, Section 8-18-15, is coring at 2,608 feet. A derrick is being erected by the Sure Oil Co. for No. 5 Murphy, SW N half NW NW, Section 15-16-15. Weiss & Simmons' No. 1 McElroy, Section 4-16-16, tested dry at 2,028 feet and is drilling ahead at 2,470 feet. Wingfield and associates' No. 1 Galligher, NW SE NW, Section 10-17-17, west of the town of Lisbon, is a rig.

Ouachita County

Two gas wells totaled Ouachita County's completions during the week. Woodley Petroleum Co.'s No. 8 Umstead, Section 4-16-16, was a 35,000,000-foot well with 770 pounds rock pressure from sand at 2,656-58 feet while Marine Oil Co.'s No. 8 Hays, same section, started off at the rate of 5,000,000 feet daily from sand at 2,615-22 feet.

H. M. Harrell's No. 2 Moline Timber, Section 17-12-17, formerly reported as abandoned at 1,168 feet, is coring gumbo at 1,413 feet. Humble's No. 11-B Arnold, Section 26-15-16, is drilling through hard dark sand at 2,761 feet. Magnolia's No. 2 Murphy, Section 30-15-16, is being bailed to test sand at 2,273-83 feet. A derrick pattern is on location for A. Meek's, trustee, No. 1 Clawson, NW NE NE, Section 35-15-17. Ohio's No. 8 Goodwin, NW SW SE, corrected location, is being delayed by a fishing job at 2,408 feet. Phillips Petroleum Co.'s No. 1 Tate, Section 9-14-17, is drilling at 1,860 feet. J. D. Reynolds' No. 1 Ratch & Cartier, Section 2-14-18, is down 2,020 feet and drilling ahead.

Simms Oil Co.'s No. 11 Hildebrant, Section 28-15-15, was bailed dry at 2,645 feet and is going ahead at 2,713 feet. Six and five-eights inch casing was cemented at 2,628 feet at Simms' No. 6 T. Murphy, Section 29-15-15, and tested dry at 2,638 feet. Salt water is being shut off and the test is drilling ahead at 2,654 feet. Smith Drilling Co.'s No. 3 Shirey, Section 36-15-17, was shut down at 2,125 feet for water. Standard Oil Co.'s No. 9 Murphy, Section 29-15-15, is drilling in hard sand at 2,076 feet. Sun Oil Co.'s No. 6 Hardin, Section 27-15-16, is waiting for casing to set at 1,993 feet. Sunny Jim Oil Co.'s No. 1 Hicks, Section 27-15-16, is being swabbed to test at 2,260-61 feet. The Texas Company's No. 7 Neely, Section 27-15-16, is drilling at 600 feet. Four and one-half inch casing was set at 2,423 feet at Unity Petroleum Co.'s No. 6 Umsted, Section 33-15-15. Vandiver and associates' No. 1 Yarbrough, Section 22-14-17, was shut down at 1,641 feet because of litigation. Six-inch casing was cemented at 1,550 feet at Buffalo Oil Co.'s No. 4 Morgan, Section 22-15-19. El Dorado Union Oil Co.'s No. 1 Hall, Section 31-15-19, is to be put on the pump at 2,193 feet. S. S. Hunter estate's No. 1 Dalton, Section 21-15-19, tested salt water at 1,535 feet and 6-inch was cemented at 1,529 feet, corrected depths. Louisiana Oil & Refining Corp.'s No. 2 Green, Section 22-15-19, is a rig. Magnolia's No. 2 Watson, Section 31-15-19, is being bailed to 2,152 feet to test the casing.

Columbia County

Operations are being delayed at 3,327 feet while the packer and 4½-inch casing are being fished from the hole at R. W. Aarnes' No. 2 Brown, Section 13-15-20. Six-inch casing was cemented at 2,149 feet at J. E. Crosbie's No. 3 Jones-Womack, Section 36-15-20. Gorden Powell & Dickson's No. 2 Jones, Section 36-15-20, had sand at 2,183-93 feet and is waiting for a standard rig and No. 3 on the same lease is a rig. Haynesville Trust Co.'s No. 1 Wingfield, Section 18-19-18, is being reamed to the bottom. Kentucky Arkansas Petroleum Co.'s No. 1 Peter Doss, Section 29-19-20, was drilled to 2,450 feet and then shut down. Scott Phillips' No. 2 Davis, Section 6-18-20, is shut down at 1,100 feet.

Nevada County

After several days of inactivity, Nevada County jumped back into the drilling column with four tests drilling. Autrey Oil Co.'s No. 3 Womack, Section 10-14-21, is drilling at 278 feet. W. F. Furen and associates' No. 1 Whitehead, Section 27-13-21, is drilling at 300 feet. Humble's No. 4 Bodcau, Section 10-14-21, is drilling around 375 feet. Eight-inch casing was set at 1,090 feet at Humble's No. 1-C Groves, Section 9-15-22.

Scattered Wildcats

Pine Prairie Oil Co.'s Ashley County test, No. 1 fee, Section 7-17-15, is drilling in lime at 3,370 feet. In Cleveland County, Haley and associates' No. 1 Moore, Section 29-9-10, is drilling in shale at 2,352 feet. Arkansas Fuel Oil Co.'s No. 4 Red River Lumber Co., Section 18-19-24, in Lafayette County, was a disappointment at 2,792 feet. Sand was topped at 2,788 feet and was barren to 2,791 feet. From there to 92 feet the test showed salt water. Arrangements are being made to drill deeper. In the same county, Arkansas Fuel Oil Co.'s No. 3 Allen, Section 18-19-24, has 2,100 feet of fluid in the hole from cap rock and sand at 2,777-82 feet and is waiting for a standard rig. The first two feet of the formation was cap rock and the last three was sand. Bostic Drilling Co.'s No. 1 Frazier, Section 8-18-24, is rigged up and ready to go. Gulf Refining Co. is moving in a rig to drill No. 1-E Red River, Section 10-19-24, which was formerly reported as an abandoned location. Mellick Oil Co.'s No. 1 Hawkins, Section 10-11-31, Little River County, is shut down at 1,420 feet waiting for cable tools. Lenze and associates' No. 1 Dale, Section 25-15-26, Miller County, is coring sandy shale at 2,470 feet.

LaSalle Parish

The pace in new production set last week in Urania was too swift for the field to follow this week and Urania's completions fell 4,000 bbls. shy when compared to the previous week's report.

Arizola Petroleum Co.'s No. 7 Tannehill, Section 36-10-1e, is flowing 50 bbls. daily from 3 feet of sand topped at 1,545 feet. Degman & Youngblood's No. 1 Hardtner-Tannehill, Section 8-10-2e, was a duster and abandoned at 1,564 feet. Hamilton & Musick's No. 2 Volk, Section 26-10-1e, is making 75 bbls. a day on the pump from 8 feet of sand topped

(Continued on Page 106)

MALJAMAR'S LEA COUNTY, N. MEX., WILDCAT HAS 700 FEET OF OIL

By Special Correspondent

ARTESIA, N. Mex., June 5.—Seven hundred feet of oil is now standing in the Maljamar Oil & Gas Corp.'s wildcat in Lea County, most of which, it is believed, is coming from a new sand picked up at 3,925 feet. The crew is now stringing up a new 5,000-foot drilling line and overhauling the rig, as it is the intention to drill about 50 feet deeper and shoot the hole from 3,600 feet down to the present depth. Should the well fail to make a commercial producer following the shot, it is the intention of the Maljamar Corp. to run casing and drill to 5,000 feet, which depth should put them into the Pennsylvanian and also below sea level as the elevation of the well is 3,975 feet.

Operations in Lea County have been greatly delayed due to a cloudburst which washed out 10 miles of road. Arrangements are now being made with the State Highway Department for the building of a paved road to Lea County, this being an extension of the highway that was built to the Artesia Field.

The Skelly Oil Co. is the latest of the major producers to enter this section of New Mexico and, according to an authentic report, has made a location in the NE of Section 22-17-31. This test is to be drilled in the name of the Dunn Oil Co., and will be located on a Government permit obtained by the Skelly Oil Co. Acreage controlled by this company in the Maljamar Pool consists of Sections 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, 35, 36, Township 17, Range 31e. Members of the Skelly engineering department are now located in this city surveying the company's acreage.

South End of County

In the south end of the county, the Covert test is underreaming at 420 feet, having considerable difficulty due to caving. This is expected to be overcome within the next few days.

In the proven area, four completions were made during the week. The Twin Lakes Oil Co. apparently has a good well in No. 8, in the NW cor. SW, Section 28-18-28, which is standing with 600 feet of oil in the hole, this coming from a depth of 2,625 feet.

In the NE SE, Section 21-18-28, Flynn, Welch & Yates have a good producer in No. 45. The well is being cleaned out following a shot in the 2,100-foot sand.

In the north extension, the Ohio Oil Co. is cleaning out No. 9 New States in the SE SW SE, Section 4-18-28. This well was drilled to a total depth of 4,035 feet and plugged back to the 2,300-foot level.

The Texas Company is completing what appears to be a good producer in No. 5, located in the NW NE NE, Section 8-18-28. Three hundred feet of oil is standing in the hole, this coming from a depth of 2,225 feet.

Considerable interest is being taken in the Empire Oil & Gas Co.'s No. 1, in the SW SW, Section 35-17-27, due chiefly to two shallow showings obtained. This test is located on what is believed to be a large structure west of the present productive area. The hole is now down 700 feet.

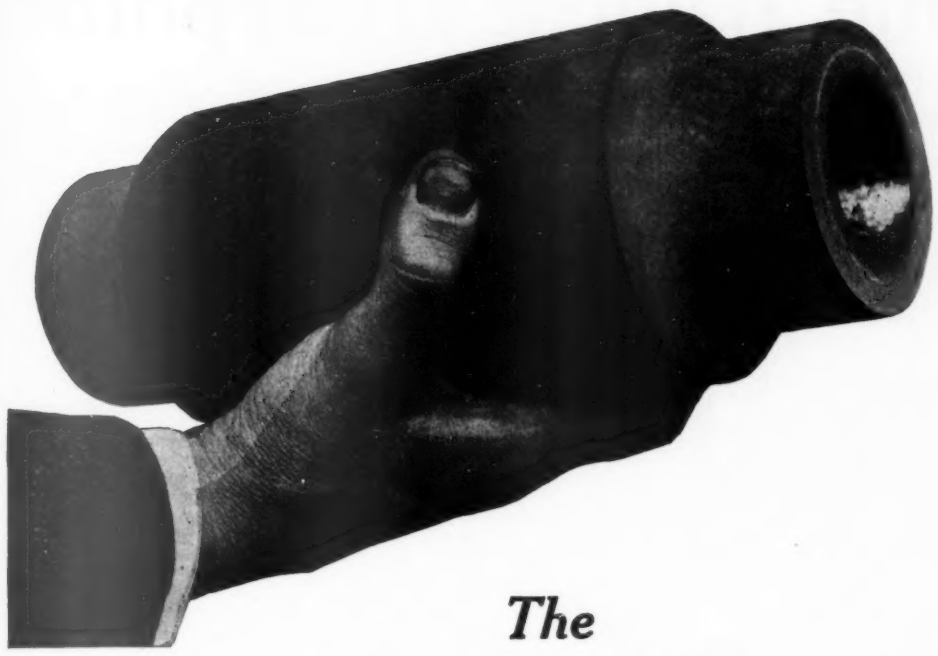
A contract has been let by Yates and Dooley for the deepening of the well, formerly known as the Cook-Ironsides, which was drilled to a shallow depth some time back. This well is located southwest of the field in Section 11-20-29.

A one-fourth interest in the Dome Oil Co., owned by John Lemond of Chicago, has been purchased by Van Welch of this city. The Dome is one of the best pieces of production in the Artesia Field and is located in Section 21-18-28.

H. F. Hall, oil operator of Los Angeles, will drill a wildcat test west of the Pecos River, approximately 10 miles west of Lake Arthur, in Section 27-14-24, a block of 750 acres having been obtained.

North of Roswell, Neal and others' No. 1, in Section 25-9-25, has been abandoned

(Continued on Page 88)



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Edwards Lime Wildcat Disappointing

Marland Test East of San Antonio With Slight Showing of Oil Tested Sulphur. Five Deep Tests to Be Drilled

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., June 7.—The Marland Oil Co.'s well on the Mihalski farm, 18 miles east of San Antonio, a wildcat, tested sulphur water in the Edwards lime Saturday, and registered a failure. It had 67 feet of Edwards lime below the casing seat, total depth being a little over 1,700 feet. It had proven a structure and was reported to have had a slight showing of oil, sufficient to warrant setting 8¼-inch casing for a test and the announced intention before the casing was set was that if it proved a failure in the Edwards lime it would be carried down to the Glenrose. It eliminates one more of the Edwards lime tests in the Balcones Fault zone but is causing some additional interest in deeper drilling for the apex of the structure in the lower formations is likely to broaden and form a better reservoir for oil. The showing in the Marland well was sufficient that considerable trading in royalties resulted while the well was waiting for a test. Royalties moved on a basis of $200 for an eighth and one large operator in the San Antonio territory put as high as $15,000 in cash in protection around the well. The McClure well (Utah Texas) in southern Bexar County, now 40 feet into the Edwards lime and having some favorable indications, will be the next Edwards lime well to test in this territory.

Aside from the Marland well the week has been rather quiet but with considerable activity in the Laredo territory where William F. Morgan completed a well flowing 1,500 bbls. in the northwest corner of Block 14 of Survey 291 in the Randado Field. It is about the same distance from the line of gas wells that the Houston Gulf Gas Co.'s No. 4 on Block 20, which was also a big well. Depth of the Morgan well is about the same as other wells in the field, a little below 1,200 feet.

Randado Field

Houston Gulf Gas Co. completed its No. 7 Palacious in Block 11 of Survey 291 of the Randado Field the past week. The well was drilled in at a total depth of 1,269 feet and the oil rose nearly to the top of the casing. It was being put on the pump last week and will make a good well, pumping probably better than 100 bbls. a day, possibly as much as 200. It is 150 feet south of the center of the north line of Block 11. Morgan Oil Corp.'s No. 1 Palacious in the southeast corner of Block 12 of the same survey located approximately 1,200 feet to the southwest of the Houston Gulf Gas well which came in May 25 as a gas well with casing set at 1,254 feet. It was deepened to 1,291 feet and tested again May 30 and came back as a gas well. The lower sands cored failed to show any oil. This well and the Simms Co.'s No. 1 Palacious, approximately 1,000 feet northeast, and the Magnolia Co.'s No. 1 Merchant State Bank, approximately a half mile southwest, are nearly in a straight line and all gas wells, though the Morgan well is about 200 feet to the southeast of the line and in the direction of the oil production. It was thought it should have made an oil well but the failure of the cores below the gas sand to show any oil seems to establish the line of gas production off to the northwest of the field. Simms Co., the past week, completed No. 3 Palacious in the southeast corner of the Simms block, the hole standing 800 feet in oil and looking like about a 200-bbl. pumper. Simms Co.'s No. 4, two locations to the west and a north offset to the Houston Gulf Gas Co.'s No. 7 on Block 11, was being bailed late last week and will probably make an oil well. The next location to the west of it is Simms Co.'s No. 2 which is making oil and gas and two locations west is Simms' No. 1, a gas well. No. 5, located between Nos. 3 and 4, is drilling at about 200 feet.

Magnolia Petroleum Co. is ready with casing set at 1,216 feet to bring in its No. 5 Merchant State Bank on Survey 267, one location north of its gas well on that survey and No. 2, if it follows the theories of the field, will be another gas well. Magnolia's No. 3 Palacious in Block 10 of Survey 291 was completed the past week and is a 100-bbl. pumper. No. 4 Palacious in the northwest corner of Block 10, Survey 291, is nearly ready to complete and a location has been made 300 feet north of it for another which will offset the Simms Co.'s No. 3. Wheelock & Collins are drilling in their No. 1 Palacious in Block 21 of Survey 291, located 150 feet south of the north line and the second location west of the west line. It is two locations east of the Magnolia gas well on 267 and is in the direction of oil. It is in line to make a big oil well. Simms Co. has the derrick up for its No. 1 Weil, nearly a mile north of present production. Andrews Petroleum Co. completed its No. 1 Merchant State Bank on Survey 267, a half mile to the northwest of the Simms gas well on 291, completing the hole to 2,510 feet. There is a possibility that some of the major interests interested in the territory may contribute dry hole money to carry the test to 3,000 feet otherwise it will be abandoned at the present depth.

Dissolve Joint Ownership

Houston Gulf Gas and William F. Morgan have dissolved the joint ownership of leases in the Randado Field in Block 11, 14, 12, 20 and 22. Morgan has the south 12 acres out of Block 11 and north 10 acres out of Block 14, south 11 acres out of block 20 and north 11 acres out of block 22 and south 10 acres out of west 30 acres of Block 12 and Morgan Oil Corp. has east 10 acres out of Block 12. Houston Gulf Gas has all the remainder of the five blocks. Houston Gulf Gas Co. is drilling No. 6 (numbers have been changed), 150 feet south of the center of the north line of Block 20 at 1,238 feet. It is one location west of No. 4 on the same block which is the biggest oil well in the field thus far, flowing about 750 bbls. daily natural flow. No. 8 in the northeast corner of Block 11, located 150 feet each way from the two lines, is being drilled in, and No. 9, one location to the west of 8 and one location east of 7, which is standing nearly full of oil, are being drilled in. Black, Pearson & Hudson have two wells on Block 13 ready to bring in. American Well & Prospect Co.'s No. 3 Palacious, in Block 15 of Survey 291, has casing set at 1,244 feet and total depth 1,252 feet and is ready to drill in. William F. Morgan's No. 1 Palacious in the southwest corner of Block 11 of Survey 291, located 150 feet out of the corner each way, has casing set at 1,283 feet and drilled in. It showed considerable gas and a little oil. It may make a gasser. It is 400 feet southeast of the Morgan Oil Corp.'s No. 1 in the southeast corner of Block 12 which is a gas well.

Henne, Winch & Fariss Pool

Crown Central Petroleum Corp. has completed a big gas well in Block 23 of Section 12 of the Holbein ranch, Las Animas Grant, in Jim Hogg County, at a total depth of 2,114 feet. It is a half mile west of Kitselman & St. Albans' No. 27, Block 40 of Section 11, which came in some months ago making oil and opening a new pool. Crown Central's well was completed, bailed in and tested and then closed in. Before the crowd got away from the well a split appeared in the casing and it was necessary to reopen the well and allow it to flow wild until the well could be reworked. A split bradenhead is being put on. The split in the casing is not considered serious. Kitselman & St. Alban's No. 33, in Block 30, Survey 12, a little over a half mile to the east and a little north of No. 27, the discovery oil well, has been abandoned at 2,158 feet. It tested salt water and seems to be too far to the east. No. 3 T. P. Holbien was completed at 2,089 feet on Block 25 of Section 15, a quarter mile due north of oil production in the Henne, Winch & Fariss Field and is a 15,000,000-foot gasser. Kitselman & St. Albans-M. E. Weber's No. 2 Holbein, Block 1, Section 16, a mile east and a little south of the No. 27 discovery oil well, is drilling at 1,400 feet. The same interests are moving in for No. 3 Holbien in the opposite corner of the same block. Kitselman & St. Albans' No. 36 Holbien, Block 14, Section 11, is drilling at 1,400 feet. No. 37 is drilling at 1,500 feet, in Block 30, Section 12. No. 38 is a location in Block 8, Section 16. No. 39 is a location in Block 40 of Section 11. Associated Oil Co. is drilling at 1,700 feet in No. 2 Lopez, Block 21, share No. 1 of the Las Animas grant.

Jim Hogg Wildcats

Murchison & Fain are fishing for a slip at 2,286 feet in No. 1 Yeager in northwestern Jim Hogg County. Simms Oil Co. is moving in a rig to drill on Section 23 of the Wilbur Allen ranch in Jim Hogg County. Benedum & Trees interests are drilling at 3,153 feet in No. 1 Allen in Block 85 of the Wilbur Allen ranch, and are drilling at 1,102 feet in No. 2 Allen in Block 22 of Section 41 and at 2,600 feet in No. 3 Allen in Block 9 of Section 32 of the same ranch. Simms Oil Co.'s Leyendecker test on Block 7 of Section 143 is drilling at 1,198 feet.

Jim Wells County

Benedum & Trees are drilling at 3,100 feet in No. 1 Gallagher in Jim Wells County a little south of Sandia.

Cole Field

Cole Petroleum Co. completed No. 22 Benavides on Block 13 of Section 11 of the Cole Field the past week making a 45,000,000-foot gasser. It is located about 700 feet south of the Cole No. 17 which has been making a little oil and is about 1,100 feet south of the Cin-Tex Petroleum Co.'s discovery oil well of the field. No. 22 showed a trace of oil but there seems to be little or no chance of it making anything but a gasser. Cin-Tex Petroleum Co.'s No. 6 on Block 16 of Section 10, 800 feet north of the discovery well, came in a week ago flowing naturally 30 bbls. per hour and showing very little gas. It dropped to about 25 bbls. an hour a few days later and early last week began increasing to an estimated 40 bbls. an hour. Cin-Tex Co.'s No. 7, located northwest of the Cin-Tex discovery well, has casing set and is ready to drill in. The core looked like it would be an oil well. It is 350 feet from the discovery well.

A feature of the Cole Field at this time is the announced intention of the Cole Petroleum Co. to drill five deep tests in and around the field to 4,000 feet or below. Two of these are already started and derrick timbers are on the ground for a third. One is the Cole No. 25 on Block 1 of Section 18, a mile southeast of the field, now drilling at about 800 feet. Another is No. 10-A, 2½ miles to the northwest and on Block 5 of Section 3 and in Webb County, now drilling at 1,700 feet. This is near the No. 10 drilled earlier in the year to around 2,693 feet where it was abandoned after it had showings of both gas and oil at various depths. The third is No. 9-A on Block 7 of Section 753, 5 miles west and a little north of the oil center of the field and 2 miles west of No. 10-A. Derrick timbers are now on the ground and the test will be rigged up as soon as repairs can be made on the rig. The other two deep tests will be drilled somewhere around the center of the present developed gas area. Killam-Alexander the past week completed No. 1 Benavides in Block 4, Section 12, in the Cole Field and just over the line in Webb County, estimated at 25,000,000 feet of gas. Cole Petroleum Co.'s No. 23 Benavides, in Block 9, Section 8, Webb County, has set casing at 2,060 feet and will drill in probably some time this week. It is expected to be gas, being at the gas horizon and in the gas area.

Has 600,000,000 Feet of Gas

Cole Petroleum Co. now has developed 600,000,000 feet of gas (open flow) in the Cole Field, most of which will be taken by the Houston Oil Co., which has 16-inch pipe en route to lay an extension of its line from the Cartwright Field at Lucas in southern Live Oak County to the Cole Field. Houston Oil Co. has 12¼-inch pipe leaving the mills and en route to be laid from the Cole Field northeast to a connection with the 16-inch. It already has a line that has been in operation for several months from the Live Oak Field to Houston, where gas is being used industrially.

Another feature of the field this week is the announced intention of the Cin-Tex Petroleum Co. to drill soon on Survey 354, 1 mile to the northeast. There is a growing belief that the oil production trends to the northeast since it is cut off in most other directions by gas production and with a possibility that the oil-producing area may be rather limited and circumscribed. Houston-Gulf Gas Co. and Col. A. E. Humphreys completed two gas wells off in that direction, but a little more due north. They cored 21 feet of gas sand and below that 35 feet of oil sand, but thus far have not been able to get oil production.

Houston Oil Co.'s No. 3, which was temporarily abandoned at 1,794 feet, a little below the producing depth of the oil wells, is being deepened and is down around 2,200 feet. No. 4 is standing at 1,994 feet. No. 5 in Block 1, Section 17, is going on the pump. It was completed at 1,802 feet and still in oil to within 300 feet of the top, but failed to flow. No. 1 did the same thing, but after being pumped began to flow. Barkley-Meadows and William F. Morgan's No. 2, in Block 4, Section 10, was brought in a 35,000,000-foot gas well. George M. Ball, 2 miles east of the field, in Survey 463, is drilling at about 1,600 feet. O. W. Killam's No. 7 Benavides, Block 1, Section 10, is moving in rig. Killam's No. 1, Block 8, Section 10, is drilling at below 600 feet. Killam-Slocum's No. 1, Block 4, Section 15, is drilling below 1,450 feet.

Piedras Pintas Salt Dome

Moody-Seagraves and Morgan's No. 1 Walsh, 450 feet southwest of Humble discovery well at Noleda, on the Piedras Pintas Salt dome, at 3,620 feet is to be abandoned and the casing will be pulled and the hole plugged. Magnolia Petroleum Co.'s No. 1 Speer, one-half mile northwest of the discovery well, is drilling at 3,460 feet. Humble Co. is nearly ready to spud in on No. 6 Walsh, west of the discovery well and has the location

(Continued on Page 110)

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Half Coastal Output from Deep Areas

Vacuum Oil Gets 2,500-Bbl. Well in Boling Pool. Five-Year-Old Well in Orange Pool, Flowing 2,500 Bbls.

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., June 7.—Wells completed during the week in the Gulf Coast region number 22, of which 5 were dry and one a salt water hole. The new production totals 8,130 bbls. Six holes are bailing at the close of the week. More than 50 per cent of the new output was developed in deep sand areas.

Among the deep sand wells abandoned was the Rycade Petroleum Corp.'s No. 1 Kountz, on the south side of the Markham Pool in Matagorda County, at 5,148 feet.

Production in the Boling Pool had taken a sudden drop during the week, falling to an average of 1,400 bbls. per day, when the Vacuum Oil Co.'s No. 3 Hooper came in at 3,590 feet, flowing 2,500 bbls. It brought the average for the entire week up to around 2,000 bbls. Same company abandoned No. 1 Hooper at 4,620 feet, the deepest test in the pool to date, and is putting in a standard rig to pump No. 2 Hooper at 3,804 feet. The Humble Oil & Refining Co.'s No. 3 Hawes is pumping 50 bbls. at 3,200 feet. No. 9 Hawes is bailing at 3,175 feet. Oxford Oil-Southern Exploration joint No. 5 Floyd shows salt water. The Sun Oil Co.'s Nos. 3 and 4 Taylor and Sinclair Oil & Gas Co.'s No. 4 Taylor also shows salt water at 3,950 and 3,850 feet. The Texas Company's well that flowed for 60 days has quit and will be put on the pump.

The Hull Pool furnished several small wells this week. The Republic Production-Houston Oil Co.'s No. 127 Dolbear is a 150 bbl. pumper at 1,725 feet, and No. 129 Dolbear heads 300 bbls. at 2,275 feet. The Mecom Oil Co.'s No. 2 Taylor, a workover, heads 300 bbls. at 3,575 feet. Gulf Production Co.'s No. 22 Morris-Phillips will pump, and No. 17 Scarborough is bailing at 3,940 feet.

One of the best wells of the week was in the Orange Pool, where the Orange Petroleum Co. worked over No. 1 Berwick at 3,625 feet and it responded flowing 2,500 bbls. The well is in the south end of the pool and is five years old. Same company is bailing No. 12 Chesson at 4,325 feet. Gulf Production Co.'s No. 3 Hager fee, on the west side of the Cow Bayou, another worked-over hole, will pump at 4,650 feet.

The Humble Oil & Refining Co. abandoned two tests in the Goose Creek Pool. No. 67 Smith was plugged at 2,950 feet and No. 68 Smith at 4,400 feet. The Gulf Production Co.'s No. 12 Galliard fee is pumping 150 bbls. at 4,350 feet. It is a workover. The Sun Oil Co.'s No. 8 Wright will pump at 2,500 feet. L. G. Marshall's No. 3 Bryan will pump at 4,250 feet.

The H. & W. Oil Co.'s No. 2 Bailey at Humble is a 25-bbl. well at 1,000 feet. No. 3 is drilling. The Brane Oil Co.'s No. 5 Perkins is preparing to bail at 2,450 feet.

The Unity Oil Co.'s No. 45 National at Spindletop is bailing at 932 feet. The Texas Company abandoned No. 22 Arnold at West Columbia at 3,972 feet. No wells are now drilling in either the West Columbia Pool or at Damon Mound, 12 miles northwest, both of which were active spots a few years ago.

Sour Lake Pool

The Humphreys Corp.'s No. 1 Jackson, on the southwest side of the Sour Lake Pool, reported late last week as a 1,500-bbl. well at 4,109 feet, is still flowing 1,200 bbls., while the Yount-Lee Oil Co.'s No. 3 Gilbert, another deep sander on that side of the pool, is making 1,000 bbls. Four rigs are now operating on the new southwest side, which is a deep sand proposition with high gravity oil. The Yount Lee Oil Co.'s No. 4 Gilbert is around 2,800 feet and No. 1 Lynn fee is at 2,035 feet. The Bashara Oil Co. has started No. 1 fee and the Sun Oil Co.'s No. 1 Libbie is drilling around 3,610 feet. Yount-Lee Oil Co. got the first deep sand producer on the Gilbert tract. The Humphreys Corp.'s well is about 200 feet northwest of the Gilbert. Humphrey's No. 2 Jackson is rigging 100 feet northwest from No. 1 and a location has been made for No. 3 some 550 feet northwest from No. 1. The Bashara test is 350 feet northwest and the Sun Oil Co.'s No. 1 Libbie is 1,400 feet west. The two Yount-Lee tests are located 100 and 400 feet southwest. Falloure and Hebert are deepening No. 3 Jackson. In the old part of the pool, the Minor Oil Co.'s No. 78 feet is drilling at 835 feet. The Lake View Oil Co.'s No. 48 Hardin is at 776 feet. Barclay Oil Co.'s No. 3 Rogers is bailing at 1,100 feet.

The discovery of deep sands on the southeast and northwest sides of the old Spindletop Pool has stimulated activity there. Six deep sand tests are now drilling there. The original pool is just south of the city limits of Beaumont. The Yount-Lee Oil Co.'s No. 6 McFadden, on the southeast side, is fishing at 2,450 feet with the drill pipe stuck in the hole. No. 1 Quinby is a derrick. Same company's No. 5 Gladys on the northwest is at 456 feet. Brown-Williams' No. 1 Gladys is idle. O. Barbee Oil Co.'s No. 1 Garrick is idle at 1,120 feet. The Sun Oil Co. is rigging No. 1 Weed, the Gulf Production Co.'s No. 1-A Weed and the Rio Bravo Oil Co.'s No. 1 Right of Way. In the old section, Porch & Telshow's No. 1 Trembly is fishing for struck drill pipe at 1,700 feet. Wilson & Broach's No. 49 National is drilling at 755 feet.

Humble Oil & Refining Co. quit No. 1-B Duessen at South Liberty at 3,668-3,700 feet. Its No. 2 Welder, on the west side of the Trinity River, is at 1,765 feet. Coastal Oil Co.'s No. 1 Lecoure is at 2,655 feet. Premium Oil Co.'s No. 1 Mitchell, on the north side of the pool, is at 1,985 feet.

East Batson Oil Co.'s No. 13 State Land, in the Batson Pool, is bailing at 980 feet. In the deep sand northwest area the Capitol Oil Co.'s No. 5 Hodges is drilling below 1,235 feet.

The Gulf company abandoned No. 8 Davis at Long Point Dome, Fort Bend County, at 3,660 feet.

South Louisiana

In the Vinton Pool, Wilson & Broach's No. 7 Lyons is a 30-bbl. pumper. The Edgerly Petroleum Co.'s No. 4 Vincent is pumping the same amount.

The Gulf Refining Co.'s No. 39 Star is drilling around 3,765 feet and No. 4 Gray is at 1,345 feet. The Texas Company's No. 15 Gray is drilling at 1,875 feet. The Vinton Petroleum Co.'s No. 15 Harmony is at 2,109 feet. No. 20 Rescue is around 1,000 feet and No. 28 Gray is at 2,235 feet. Pelican Oil Co.'s No. 2 Lyons is fishing. Vinton Oil Co.'s No. 2 Johnson is below 2,700 feet. Marrs McLean is rigging No. 11 Gray.

In the Edgerly Pool, the Green Oil Co.'s No. 7 Moore is flowing 300 bbls. of fluid by heads, 40 per cent oil, at 2,900 feet. Gulf Refining Co.'s No. 31 Bright Penn is bailing at 3,200 feet. Rex Oil Co.'s No. 3 Hunter is rigging up.

In the Jennings, (Evangeline), Pool the Myers Oil Co.' No. 5 Chicago is pumping 20 bbls.

F. I. Getty's No. 3 Clements is drilling around 1,455 feet. The Utopal Oil Co.'s No. 1 is at 2,670 feet. The Texas Company's No. 104 Latrielle is fishing at 1,870 feet. Gulf Refining Co.'s No. 27 Jennings Clement is at 1,655 feet.

In the Lockport district, near Lake Charles, the Vacuum-Gulf joint No. 7 Miller is deepening from 3,875 feet. No. 10 Miller is drilling at 1,980 feet and No. 11 is rigging. No. 4 Lock-Moore, north of the Miller is drilling at 4,055 feet. No. 3 Farquhar, west of the Miller is at 4,335 feet and No. 1 Friedberg & Wolf, is deepening at 5,035 feet. A derrick is standing for No. 3 Bordages.

Other Tests Drilling

In the Saratoga Pool, the Rio Bravo Oil Co.'s No. 5 Fountain is drilling at 4,235 feet. No. 4 Cotton is at 1,145 feet. Paggi & Co.'s No. 43 Queen is at 435 feet.

At Pierce Junction, Navarro Oil Co.'s No. 3 Cain is rigging. The Rio Bravo Oil Co.'s No. 2 P. F. Settegast on the west side, is at 3,655 feet with a location made for No. 3. Gulf production Co.'s No. 18 Taylor on the east side of the dome is at 2,955 feet.

At Blue Ridge, the Gulf Production Co.'s No. 7-B Blakely is at 2,655 feet on the north side. No. 3 Invincible on the west side is at 2,800 feet and Abercrombie and others' No. 1 West-Schenck on the south side of the dome, is deepening at 2,610 feet.

At High Island, Gulf Production Co.'s No. 5 Smith is drilling at 3,675 feet. No. 2-A Smith is rigging. Sun Oil Co.'s No. 8-C Cade is at 3,765 feet and No. 10 Cade is around 3,545 feet. Paggi Brothers' No. 1 Jackson is drilling at 455 feet.

At Goose Creek, Humble Oil & Refining Co.'s No. 12 Peninsula is at 2,235 feet. A location has been made for No. 17 Peninsula. No. 22 is drilling at 3,345 feet. The Powell Oil Co.'s No. 6 Bryan is around 2,875 feet. M. & B. Oil Co.'s No. 4 Scorrgea is drilling at 4,010 feet. Gulf Production Co.'s No. 12 Chapman-Bryan is at 2,235 feet. No. 5 Hirsch is bailing at 4,450 feet. No. 7 Wright is at 3,870 feet. No. 33 Beaumont is at 3,055 feet. No. 8 State land is drilling deeper at 3,655 feet. No. 18 Smith is rigging to drill deeper.

Orange Pool

In the Orange Pool, the Peer Oil Co.'s No. 1 Mecom is being worked over. Brownie Babbittee Oil Co.'s No. 2 McLean is at 3,145 feet. A location has been made for No. 11 McLean. The Rex Pet Co.'s No. 4 Carbello is at 3,765 feet. Kishi Development Co.'s No. 7 McGuire is at 4,655 feet and drilling deeper. Orange Petroleum Co.'s No. 1 Williams is at 4,765 feet. Rycade Petroleum Corp.'s No. 5-B State land is at 3,235 feet. Humble Oil & Refining Co.'s No. 25-A Chesson is at 2,655 feet. Texhoma Oil Co.'s No. 6 Chesson is fishing at 4,655 feet. No. 9 is idle at 4,375 feet. No. 15 Chesson is drilling around 3,756 feet. Gulf Production Co.'s No. 11-A Kishi-Lang is at 2,235 feet. No. 23 Hager is around 3,875 feet. No. 2 Peveto is at 3,357 feet. No. 4 Hager fee is at 3,255 feet.

In the Hull Pool, the Republic Production-Houston Oil joint No. 126 Dolbear is drilling around 2,135 feet. No. 128 is rigging. No. 129 is drilling around 2,355 feet. No. 130 is drilling at 1,155 feet. A location has been made for No. 131. Humble Oil & Refining Co.'s No. 23 Guedry is drilling at 1,155 feet with a derrick standing for No. 22. Locations have been made for Nos. 6 Merchant and 1 Lynn. Gulf Production Co.'s No. 68 Phoenix is drilling around 1,155 feet with Nos. 69 and 70 rigging up. Nos. 18 Hannah fee and 18 Baldwin fee are also rigging to start drilling. The Texas Company's No. 1 Hannah is around 3,154 feet. No. 10 Merchant is at 4,235 feet. Texas-Vacuum joint No. 1 Hannah is sidetracking. No. 2 Hannah is at 2,980 feet. Mecom Oil Co.'s No. 9 Taylor is rigging. Houston Production Co.'s No. 6 Palmer is at 2,485 feet. Empire Gas & Fuel Co.'s No. 19 Barngrover is at 3,225 feet.

Boling Dome

At Boling, the Humble Oil & Refining Co.'s No. 6 Hawes is at 4,615 feet. No. 7 Hawes is around 4,090 feet. A location has been made for No. 8. No. 10 is drilling below 3,465 feet. A derrick is up for No. 11. No. 12 Hawes is around 2,100 feet. Derricks are standing for Nos. 14 and 15, with a location for No. 13. The Gulf Production Co. is interested with the Humble Co. in this lease. The Texas Company's No. 8 Taylor is drilling around 4,100 feet. No. 9 Taylor is around 3,376 feet. The Texas Company's No. 1 Felder is at 3,240 feet. No. 2 Floyd is drilling at 655 feet with a derrick up for No. 3 Floyd. Sinclair Oil & Gas Co.'s No. 5 Taylor is at 4,135 feet. Sun Oil Co.'s No. 11 Taylor is drilling below 4,190 feet. The Atlantic Oil Producing Co.'s No. 3 Taylor is idle. Vacuum Oil Co.'s Nos. 4 and 5 Hooper are locations.

Out northwest from the production, the Humphreys Corp.'s No. 1 Mick is below 3,980 feet and No. 1 Woodfine is at 1,980 feet. Moody and Seagraves' No. 1 Woodfine is at 1,065 feet. Bennett Production Co.'s No. 1 Woodfine is at 1,875 feet. On the northeast side of the dome, the Sun Oil Co.'s No. 1 Farmer is drilling below 1,100 feet. The Texas Company has a derrick up for No. 1 Farmer.

The north side of the Barber Hill Dome the Bennett Production Co.'s No. 2 is rigging and the Kirby Petroleum Co. is starting No. 1 Bullock.

Around the Nash Dome, the Rycade Petroleum Corp. has locations for Nos. 8 and 9 Nash and 7 and 8 Wisdom. No. 3 Flessner is fishing at 4,011 feet. The Gulf Co. has a location for No. 7 Moore at Orchard Dome, northwest of Rosenburg.

Estimated Daily Average Production

The estimated daily average gross production for the week ending June 5 is placed at 100,460 bbls., compared with 105,745 bbls. last week.

The estimate for each pool is as follows:

Pool—	Gross Bbls.
Boling	2,000
Batson	1,460
Blue Ridge	910
Barber Hill	550
Big Creek	995
Dayton	45
Damon Mound	940
Edgerly, (La.)	690
Goose Creek	9,975
Humble	4,510
Hull	19,090
High Island	100
Jennings, (La.)	1,350
Lockport, (La.)	1,900
Markham	75
Nash Dome	1,200
Orange	11,600
Orchard	1,875
Pierce Junction	1,875
Piedras Pintas	100
Spindletop	7,500
Saratoga	1,415
Sour Lake	5,750
South Liberty	5,610
Vinton, (La.)	6,590
West Columbia	9,250
Welsh-Anse La Bute	75
Miscellaneous	120
Total	100,460

Southwest Fields

The estimated daily average gross production in the southwest fields for the same period is placed at 37,855 bbls. The

(Continued on Page 110)

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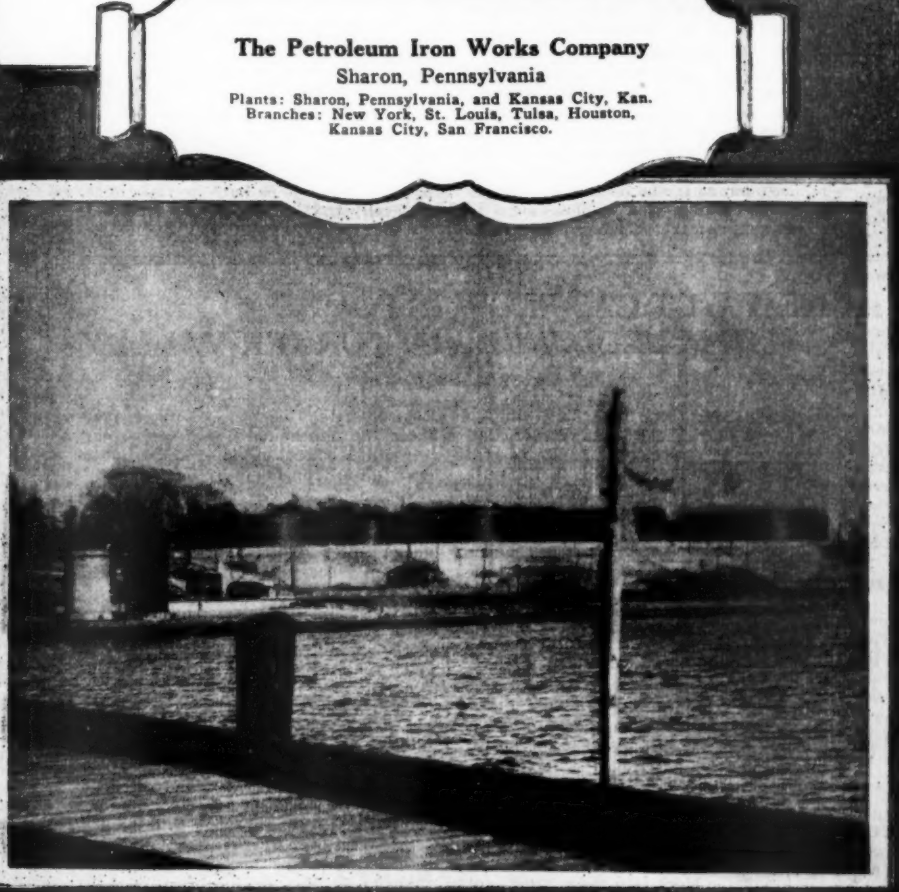

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Cane Creek, Utah, Well to be Deepened

Unable to Shut Off Water Coming From Above. Second Test Being Started. Carbon County, Wyoming, Showing

By Frank B. Taylor
Staff Correspondent, Rocky Mountain Area

CASPER, Wyo., June 5.—The Midwest Refining Co. and the Utah Southern Oil Co. have given over any attempt to produce the discovery well on the Cane Creek structure in east central Utah from the sand where the flows of oil have been coming from. After six months working to shut off water that comes in from above, the sand will be mudded off completely, the casing pulled and the well drilled on down as a test of the deeper Pennsylvanian formation. At present the well is at 2,028 feet.

The effort to shut off this water has been a most costly one. Since the well was first drilled in last December, the water has continued to come into the hole in spite of all trials. Cement and mud were tried numerous times, but as fast as the hole was bailed and the drilling started, the water broke through after every attempt.

The sand that produces the oil was found at 2,002 feet and the well came into production without warning. It was wholly unexpected and no preparations had been made. Had the drillers expected a well at that depth, a water-tight shutoff would have been had above the sand, but under the conditions, the well has been a failure every time the water was cemented.

The well is ready to flow oil as was shown when the hole was swabbed last week. Shortly after the swab started to relieve the hole of water, the well started to flow with the same strength it showed when first drilled.

The two companies have made a location for a second well, on Section 36-26-20, and the rig is being built. On the Shaffer Dome, about 5 miles southwest, No. 1 Shaffer, being drilled by the Midwest Refining Co. and Utah Southern, is down 1,000 feet, on Section 17-27-20, and a showing of oil was found at 720 feet. This well is expected to reach the sand at about 1,900 feet as it is higher structurally than the Cane Creek discovery well. The Midwest Refining Co. is preparing to drill a test on the Elk Ridge anticline, a large structure about 25 miles south of the Cane Creek well and is making a road to the location site.

The Bix Six Oil Co.'s well just outside the town of Moab is running a string of 3-inch casing at 2,876 feet and the well expects the Cane Creek sand at about 3,000 feet. The hole will be ratholed from now on to see what the lower sands contain. This well is being drilled by the Embar Oil Co. for the Big Six Oil Co.

Rattlesnake Line Completed

The new pipeline from the Rattlesnake Field in northwest New Mexico, to the Santa Fe Railroad near Gallup, has been completed by the Continental Oil Co. under the direction of Thomas Kenny, in record time.

This line is 94 miles long of screw pipe, 4-inch and laid over an arid desert country with hardly any roads worthy of the name. Under the direction of Thomas Kenny and backed by S. H. Keoughan, the line has been completed and was tested by putting the oil through it instead of the usual way of testing with water. This oil is very high gravity, sometimes as high as 72 degrees, and would be more apt to show leaks than would water. Only two joints in the whole line were found defective and those were soon replaced and the line is now carrying crude to the Santa Fe without trouble.

Mr. Kenny is one of the oldest pipeline engineers in the country, having started back in Pennsylvania when a boy, in the pipeline work. He served many years with the Illinois Pipe Line Co., leaving that firm to enter the services of the Continental Oil Co.

This new line will deliver the Rattlesnake crude direct to a transcontinental railroad instead of a branch line as heretofore with the short lines from the field to Farmington. By bringing the crude to the Santa Fe Railroad, the operators will be able to ship the crude with a minimum of expense to either California or Oklahoma refining points.

Fort Collins Field

The Gault Piatt well of the Union Oil Co. of California, in the Fort Collins Field, has been averaging between 900 and 1,000 bbls. daily during the past week, natural flows. This well appears to be a better producer than was at first thought and will not be tubed and pumped until the production goes down from the present figure. The Stuchell well of the same company will probably be the next well to be brought in in that field. This well has about 100 feet to go to reach the Muddy sand.

Now Showing Oil

On Section 14-20-88, Carbon County, Eight-Mile Lake Dome, the Lake Valley Oil Co. found the first Wall Creek sand at 2,580 feet and a showing of oil. This structure has been producing gas for the past three years for fuel for the Parco refinery, but so far no oil has been found. The Lake Valley well is shut down to make a test of the showing, and according to reports the well will make about 25 bbls. naturally.

The country between the Eight-Mile Lake structure south of Rawlins, Wyo., and the Lost Soldier Field, which lies about 30 miles north of Rawlins, has been prospected pretty thoroughly. As a result, the Bell Springs structure has been found, but the area lying to the west and northwest of Rawlins has had but little attention. This area borders on the Red Desert and a large anticline extends across the central part of the Red Desert that is believed to be the same structure that carries the Lost Soldier fields, though the Green Mountains separate it from the Lost Soldier area.

This anticline runs almost due east and west and while the main structure may not be found productive, any superimposed domes on the main anticline are considered worth testing, for the Lost Soldier, Mahoney and Ferris are structures superimposed upon the main anticline.

The Producers & Refiners Corp. found a commercial showing on the north end of Crooks Gap, in the Ferris Mountains, last year, but subsequent development has not proven an area worthy of much. This lies on the north side of the Ferris Mountains and across the range from the Lost Soldier Field. However, the indications in the first well tend to show that oil may be found on the north side of the range as well as the south side. The surface is covered with recent deposits so that the geology is hard to determine. Physically the country on the north side of the Ferris range is well situated as the Sweetwater River parallels the Ferris Mountains about 15 miles to the north. The immediate valley of the Sweetwater, however, is granite and other older formations and is not of interest to the oil operator.

The Midwest Refining Co. has started a second well on the Notches Dome in Natrona County, Wyoming. This dome finds its production in the Tensleep sand and the oil is a black crude that has to be pipelined to the railroad through a line specially covered with insulating material that will keep the oil warm while being pumped. The production has been shut in for several months past and is used mainly for the production of asphalt at the Casper refineries.

Big Horn Basin Wildcat

An Important strike was made by the Producers & Refiners and the Kinney Coastal Oil Co., drilling a joint well on the Garland anticline in the north end of the Big Horn Basin. The well is on Section 24-56-98, and at 1,095 feet the bit entered a sand that is making 7,000,000 feet of gas.

This area is one of the most promising of the Wyoming wildcat districts. Several structures are prominently exposed and the wells drilled have showed either gas or oil and sometimes in commercial size. Due to faulting, the structures are cut off into separate divisions so that one well cannot test the whole uplift and only a few wells have been put down. The Utah Southern Oil Co. is drilling a test on the north end of the Garland structure and the Polecat structure, lying north of the Garland is expected to have a test drilled this season. The Polecat is now controlled entirely by the Danker interests of Boston, the McMahon interests being purchased recently by the Danker people.

So far only a shallow production, about 800 feet deep has been found on the Garland structure together with some gas in the deeper sands. The Polecat structure has also produced gas, but the sands below 3,000 feet have never been tested. The Utah Southern well is considered to be located north of a fault on the Garland structure that would shut off this part from the rest of the anticline and therefore the wells drilled south on the Garland Dome are not considered to have any influence on the Utah Southern well. The Producers & Refiners and the Kinney Coastal Oil Co. have 2,500 acres under permit or lease on the structure so the two companies are well protected in case a field is discovered.

Salt Creek Producers

The Midwest Refining Co. has completed 10 new producers in the Salt Creek Field, three of these were Lakota sand wells and were not drilled in, but were shut down on top of the sand.

The Wyoming Oil Fields Co. drilled a Lakota sand well to the top of the sand on Section 26-40-79, finding the sand at 2,340 feet, and shutting down, on Section 23-40-79, the same company drilled another well to the Lakota sand at 2,485 feet and one on Section 23-40-79, at 2,521 feet.

The Wyoming Associated Oil Co. found a 20-bbl. producer on Section 26-40-79, at 1,495 feet, and on Section 35-40-79, the same firm drilled a deep well to the Sundance sand and shut down on top of the sand at 2,870 feet. On Section 14-40-79, the Wyoming Associated Oil Co. has a small producer at 1,805 feet, and another of the same kind on Section 22-40-79, at 1,750 feet.

The Wyoming Oil Fields Co. has a small well on Section 24-40-79, at 1,878.

(Continued on Page 114)

NEW WET GAS FLOW IS FOUND IN M'LEOD WELL IN TURNER VALLEY

By Victor Lauriston

CHATHAM, Ont., June 5. — In the Turner Valley Field southwest of Calgary, McLeod Oil Co.'s No. 2, LSD 16, Section 1-20-3w5, is still the center of interest. At 3,678 feet the test struck a new wet gas flow in the top of the Madison limestone, estimated good for 1,000,000 feet a day. The gas was accompanied by oil, the well blowing about 125 bbls. Drilling has been stopped to cement casing at 3,642 feet, in the top of the limestone. The 6¼-inch casing will be cemented and the gas from the upper horizons forced between the 6¼-inch and 8½-inch pipe, to relieve the smaller casing of the present heavy pressure. For cementing, a wooden block is set in the bottom of the well and cement poured off the top of the block into the bottom joint of the casing. A second block is superimposed and the hole filled with water, the pressure of water squeezing the blocks together and forcing the cement around the outside of the bottom joints of casing as well as inside. After the cement has set the blocks will be drilled through and drilling continued down into the limestone. Analysis of rock samples shows an increase of 4 per cent in porosity, which indicates a chance of production in the top of the lime.

Illinois-Alberta Oil & Refining Co., LSD 14, Section 12-20 3w5, has been drilling in an exceedingly hard formation, and is now setting casing at 3,592 feet. It is apparently in the top of the Madison lime. The gas coming up between the 4-inch and 6-inch casing carries with it traces of black oil, and some heavy oil is brought up by the baler.

Vulcan Oils, Ltd., LSD 11, Section 13-20-3w5, has run casing to the bottom at 4,765 feet and resumed drilling in black shale. At this depth the test is apparently not yet in the Madison. The location is a half mile from the Royalite No. 4, which got its big production about 300 feet in the Madison at 3,740 feet depth; the difference in depth in the two wells indicating a marked dip in the formation.

Great West Oil Co.'s No. 1, SE Section 7-20-2w5, is drilling at 1,340 feet with the 15½-inch casing set to 1,100 feet. The 20-inch casing was set at 110 feet to shut off the surface water, and the drillers will now run open hole to 2,200 feet, where the 12½-inch casing will be set. Great West No. 2, same section, has a derrick up waiting for machinery. The company is also drilling two tests in Montana 2½ miles northeast of Kevin. No. 3 is down 1,045 feet and No. 4 is rigged up waiting to spud in.

Dalhousie Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, at 3,546 feet, was still pounding on old iron when the drillers lost a string of tools and 30 feet of cable, which they are now fishing. Dalhousie's No. 3, LSD 10, Section 13-20-3w5, has run casing to the bottom of the hole at 3,325 feet and resumed drilling in a brown sand, with some oil in the hole.

Dallas Oil Co., LSD 11, Section 20-19-2w5, has lowered the 15½-inch casing to 869 feet and resumed drilling. It is planned to carry the big casing to 1,500

(Continued on Page 105)

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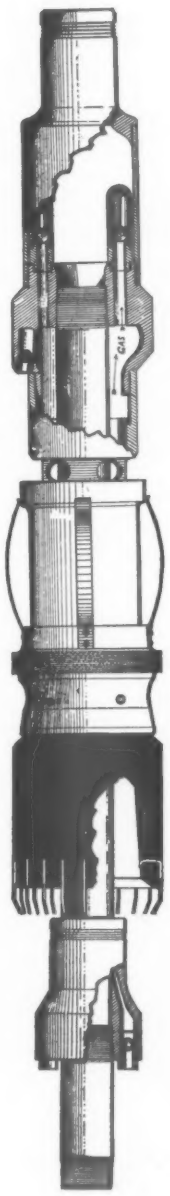

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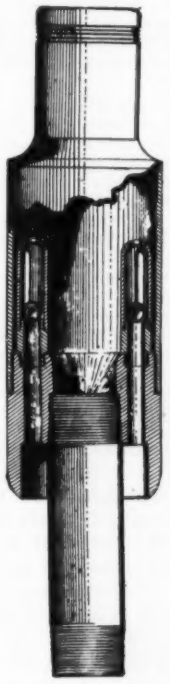

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Deeper Drilling Starts at Long Beach

Completion of Good Flowing Wells Stimulates Activity. Barnsdall Gets Big Producer at Rosecrans.

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., June 5.—The completion of several good flowing wells in the northwest extension of the Long Beach Field during the past few weeks has proved a powerful stimulant and plans are already under way for the deepening of a considerable number of upper zone producers to the lower horizon. This action has been anticipated for some time, although the work is getting under way a little sooner than was expected. The Julian Petroleum Corp. finished its second deep zone producer in two weeks and the latest completion, No. 1 Chandler, started off flowing 738 bbls. of fairly clean 22.4 gravity oil from 4,835 feet. The company has announced its intention of carrying down several additional wells to the deep zone and should be in a position to finish them some time within the next 30 days as they have but a short distance to go.

The McKeon Oil Co.'s No. 9 Cerritos is making a wonderful showing, considering the fact that it was only drilled 5 feet into the sand. This new well came in flowing 895 bbls. of clean 22.5 gravity oil from 4,816 feet, the hole being finished with a 6¼-inch landed 5 feet off bottom. The company is drilling ahead as rapidly as possible in three other wells, two of which have just passed the 4,550-foot level. Two potential deep sand producers encountered water trouble during the week but it is believed that the difficulty can be remedied by another cement job. The wells in question were Walter P. Temple's No. 1 Cerritos at 4,855 feet and the Robertson Company's No. 5 Cerritos, which made 500 bbls. of fluid from 4,831 feet.

It is quite likely that the Marine Oil Corp. and George W. Johnson will list deep zone completions during the coming week, as each picked up the pay and immediately started running the oil string. Johnson has three wells standing suspended awaiting the outcome of the test on his No. 3 and, although the Marine is not assured of production, the company is, nevertheless, going right ahead with additional work. The number of completions during the past week or two has been numerically small but the initial production has been somewhat larger than usual. This is due to the fact that deep sand drilling is only just getting under way and it is quite likely that the number of completions each week from now on will increase for some time.

Rosecrans

The Barnsdall Oil Co. finished another big flowing well in the Rosecrans Field during the early part of the week and, with the completion of this new producer, the company has boosted its daily production in this field 2,590 bbls. during the past two weeks. No. 11 O'Dea, the company's latest well, came in doing 1,730 bbls. of comparatively clean 41.1 gravity oil from 4,302 feet, the hole being finished with a 6¼-inch oil string carrying 155 feet of 100-mesh screen. No. 12 O'Dea, the Barnsdall's next producer in this field, will probably be given a test within the next two weeks. The Union will probably also be in a position to make a bid for production within a short time, as several wells on the Howard Park lease are nearing completion depths. Gerner & Ball have just finished cleaning out their No. 1 Athens to bottom, 4,762 feet, but the operation was not entirely successful, inasmuch as the well is only making approximately 100 bbls. a day.

Inglewood

The Standard had a big week in the Inglewood Field and, as the result of the completion of two flowing wells, the company's daily production was boosted 1,340 bbls. The first well brought in was No. 61 Baldwin Cienega but it was followed into production a short time later by No. 44 on Los Angeles Investment Lease No. 1. The former registered an initial production of 550 bbls. of 18.9 gravity oil from 2,200 feet, while the latter started off doing 790 bbls. of 19.6 gravity oil from 2,250 feet. The Standard, the only company doing any appreciable amount of development work in this area, is drilling four wells, in addition to working on a similar number of former producers being cleaned out.

Torrance

The Chanslor-Canfield Midway Oil Co. added another new well to its list of producers in the Torrance Field during the week by successfully finishing No. 63 Del Amo. This new well was a 128-bbl. pumper from 3,550 feet, the oil testing 17.5 degrees and showing a cut of 4 per cent. The company is at present running three strings of tools but will probably spud in another well shortly, as No. 62 Del Amo is at present being rigged up. The Standard Oil Co. reconditioned No. 13 Joughin and returned it to production pumping 77 bbls. of 20.3 gravity oil from 3,845 feet. The Petroleum Securities is experiencing considerable difficulty in getting No. 1 Hogan, a new well, on production and the outlook is not any too promising. The company finished it at 3,805 feet and, although it has been on a pumping test for the past three or four days, it has not shown anything that looks like commercial production. The Superior Oil Co. is making preparations to start some additional work in this area and, although No. 64 is being rigged up, spud will probably not be made until after the completion of No. 45 Torrance, at present rotating ahead at 3,000 feet.

The Standard's No. 45 on Lease B at Huntington Beach ran true to form, coming in doing 588 bbls. of 26.9 gravity oil from 4,384 feet. This new well, just north of the town lot area, recently opened up for work, is flowing through a ¼-inch bean under a pressure of 240 pounds. The company's latest spud in this field was No. 47 on Lease B and, in view of the fact that a new rig is going up for No. 48, the company is apparently contemplating additional work. The California Petroleum is making preparations to abandon No. 2 Elliott in this field, which at one time yielded a small production from 3,750 feet, and it is quite possible that the formal notice will be filed within the next few weeks. The Superior Oil Co., the third concern to enter the newly opened area in the southwestern part of the field, is hauling in material and will start rig construction within the next day or two. It looks as though the Wilshire Oil Co. will resume drilling shortly on its well to the north, as additional drill pipe and material is being placed on the ground.

Montebello

There were five wells finished in the Montebello Field during the past week but all of them were comparatively small pumpers. The Standard headed the list with three wells, the largest of which was No. 3 Howard & Smith, a 220-bbl. pumper from 3,718 feet. The company's No. 17 Temple showed an initial pumping of 143 bbls. of 22.1 gravity oil from 3,425 feet, the hole being finished with a 6¼-inch oil string, 650 feet of which was shop perforated. No. 67 Baldwin was listed for completion at 3,557 feet but the output, 108 bbls., is cutting approximately 10 per cent. The St. Helens Petroleum also ran into a little water trouble and No. 12 Monterey, which registered an initial pumping of 130 bbls. of rather dirty oil from 3,480 feet, will probably require another cement job. No. 11 on this lease is being prepared for production at 3,710 feet and it should be put on the beam within the next few days. The McGinley Oil Co. wound up the list with a 160-bbl. pumper from 3,425 feet and, although the initial output was cutting around 30 per cent, it has shown a decided improvement, the water content at present running around 4 per cent.

The California Petroleum put No. 2 Witt-Vining in the Rideout Heights district on a production test but it is quite evident that some further work will be required, as the present output of 42 bbls. from 2,538 feet is cutting approximately 50 per cent water. The McCaslin Oil Co.'s No. 1 Patton-Gregg, also in this area, is being given a test in the shallow sand at 1,345 feet but, judging from the results to date, the well will only be a small one at best.

The Union is still drilling ahead with its two wildcats on the Olinda Land property at Fullerton and, although both are deeper than the depth at which production was originally anticipated, they still have an outside chance of securing production. The Shell is doing the largest amount of drilling in the Fullerton Field at the present time with three wells on the Orange and one each on the Fisher and Pico leases. The Union is running three strings of tools in this field, while the General Petroleum is concentrating its efforts on the Thompson and Tonner leases at Richfield. The Standard is erecting a new rig for No. 22 on Kraemer Lease No. 2 in this field and has taken No. 6 off production preliminary to deepening it.

Ventura Avenue Field

With the present daily production running somewhere around 32,000 bbls., the Ventura Avenue Field stands an excellent chance of passing the 40,000-bbl. mark before the first of August and may perhaps reach 50,000 bbls. per day before the end of the summer season. This, of course, depends upon the amount of work undertaken during the period in question and, in view of the fact that the Shell, General Petroleum and Associated are erecting new rigs, it is believed that drilling operations will continue unabated for several months. If the Petroleum Securities and the Bolsa Chica Oil Companies succeed in finishing their present wells, it is quite possible that each will undertake additional work immediately. The former company is concentrating its efforts on the Willette and Orton properties in the southern part of the field, while the latter is drilling ahead on the Hartman lease in the extreme northern end of the district. Both companies are practically assured of production, although, of course, it remains to be seen just how big the wells will be.

The Associated's No. 18 Lloyd, in the southern part of the field, which was expected to come into production early this week, is not showing the usual amount of kick and the outlook at the present time is not any too good for a large well, although, of course, it might be possible that the heavy rotary mud has settled and is holding back production. The General Petroleum has finished new rigs for Nos. 5-A, 6 and 7 on the Barnard lease and they are at present being rigged up for early work. The Shell should be in a position shortly to increase its settled production somewhere around 5,000 bbls. a day, as the company has three wells below the 5,000-foot level, two below 4,000 feet and three approaching the 3,500-foot mark. That the company has apparently anticipated an early increase is evidenced by the fact that the finishing touches are being put on a new 8-inch pipeline connecting its producing properties with the loading facilities in the Ventura Harbor. The completion of this line gives the Shell two lines to the port, including the original 6-inch, and makes it possible to load tankers by gravity direct from the field tanks if necessary. The company recently applied for permission to erect two 80,000-bbl. steel tanks on the ocean front in order to facilitate the handling of crude and, upon their completion, will have sufficient crude stored at the harbor to load two tankers. The Shell has been using the Associated's submarine line for some time and the latter has found it necessary to augment its facilities from time to time. In order to take care of requirements during the coming summer, the Associated is putting in a new auxiliary pump, which, with the two now in, will permit the handling of 4,000 bbls. of crude per hour.

Midway-Sunset

Near the center of the south line of Section 31-12-23, in the Midway-Sunset area and adjoining Section 32 on the west, the Standard Oil Co. has a near gusher in its No. 16 Pacific, a redrill. When the company acquired this property from the Pacific Oil Co. several months ago, the well was a small pumper from 1,608 feet. The Standard started deep-

(Continued on Page 79)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This week	Daily Average	Total Last week	Daily Average	This year To date	Same time Last year
Crude oil	172,229	24,604	389,095	55,585	5,317,477	7,306,727
Fuel and gas oil	.....	.....	274,046	39,149	3,821,773	237,873
Gasoline	93,716	13,388	402,351	57,479	2,796,475	2,250,678
Tops	.....	.....	.....	.....	74,619	160,730
Coastwise—						
Crude oil	755,644	107,949	627,461	89,637	10,494,791	12,221,419
Fuel and gas oil	360,741	51,534	137,024	19,575	3,779,607	4,938,408
Gasoline	112,684	16,098	246,351	35,193	3,162,969	1,932,379
Kerosene	.....	.....	10,602	1,515	166,870	216,978
Tops	.....	.....	.....	.....	390,446	85,986
Exports—						
Crude oil	457,705	65,386	106,149	15,164	2,342,030	964,162
Fuel and gas oil	67,344	9,621	595,080	85,011	6,632,534	5,958,046
Gasoline	43,666	6,238	65,211	9,316	2,057,485	1,616,598
Tops	.....	.....	.....	.....	.....	170,407
Kerosene	.....	.....	57,108	8,158	815,126	845,399

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Fuel and gas oil	.....	.....	82,183	11,740	441,360	86,092
Gasoline	.....	.....	.....	.....	592,094	332,906
Tops	.....	.....	.....	.....	229,775	624,175
Lubricants	63,059	9,008	.....	.....	217,147	159,968
Coastwise—						
Fuel and gas oil	.....	.....	169,715	24,245	2,003,501	1,553,229
Gasoline	28,142	4,020	189,639	27,091	1,646,974	1,132,607
Kerosene	.....	.....	30,050	4,293	183,949	119,037
Exports—						
Fuel and gas oil	.....	.....	63,009	9,001	1,400,093	773,421
Gasoline	54,019	7,717	80,880	11,697	670,077	260,968
Kerosene	117,211	16,744	.....	.....	816,303	444,118
Lubricants	.....	.....	.....	.....	.....	293,429

XUM

A Distance Equal to

1200 Times Around the World

LAST year the 2885 tank cars operated by the Pure Oil Company traveled a total distance of approximately 32,000,000 miles,—a distance equal to more than 1200 times around the world.

Such activity is proof of the appreciation of "Pure Oil" service coupled with the uniform high quality of all Pure Oil products.

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They move quickly, promptly,—deliveries made on the dot. Phone, write or wire.

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SMITH'S BLUFF, TEXAS

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Illinois Field Gets 300-Barrel Well

Veale Township, Daviess County, Indiana, to Get a Play. New Deeper Sand Discovered Near Bridgeport, Illinois

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, June 7.—The bringing in of a 300-bbl. flush well on the Kogan heirs' lease in the Wabash County, Illinois, area of the Central West Field, was the development feature for the week. The drilling deeper of an old producer on the Middaugh farm, Section 32, Bridgeport Township, Lawrence County, Illinois, and the finding of a new pay sand, may mean a rejuvenating of this well-known producing area.

Bath Township, Allen County, in the Lima Field, is credited with a 50-bbl. pumper on the Lenney lease, and one at 20 bbls. on the S. H. Vore farm, same township, are among the best of the week's completions for the Trenton Rock area.

New activity in development work is noticeable in many parts of the Central West and from now on, if talk of operators is any criterion, considerable new work should soon be in progress. In Central Ohio, the gas companies are making many new locations, the most activity being shown in Wayne, Ashland, Coshocton, Guernsey, Holmes and Athens Counties. In the Lima Field, the work is well scattered over a number of counties. In Indiana, in the Trenton sand area, in Adams County, new work is springing up and in the Princeton district, in the southwestern part of the State, the Veale Township area of Daviess County, is to get a heavy play. This is virtually a new section and has but few wells, but the wells maintain their production above the average and some distance removed from the older producing fields. Wabash County, Illinois, is in for a more thorough testing than ever before, while the Centralia Field of Marion County will soon show an improvement, brought about by the recent wells found by the James Oil Co. in that field.

Michigan, according to advices, will get more real tests during the current year than in any other year in its history, due to the finding of commercial production in the Saginaw Valley.

Lima Field

In the Lima Field of northwestern Ohio few completions were reported during the past several days, but an improvement will be shown as operators are getting ready to start new work that has been planned for some time.

Several miles northeast of Lima, Charles Geselchen and others drilled in their fifth well, 300 feet from the south line and 750 feet from the east line of the William Lenny farm, in the north half of the northwest quarter of Section 12, Bath Township, Allen County, with a flush production of 50 bbls., being the best completion made in the county for a long period. On the Samuel H. Vore 80 acres, adjoining the Lenny farm, to the south and in the same quarter section, C. A. Peavey and others struck a 20-bbl. pumper in No. 4, which is in the northeast corner of the farm. O. T. Botkins and others are drilling their third well on the P. D. Driver farm, same section. The No. 5 Lenny struck top of Trenton at 1,309 feet and drilled 51 feet in the sand, while the No. 4 Vore well struck top of sand at 1,314 feet and drilled 37 feet in the sand. This is southwest of the town of Beaver Dam and between there and Lima and south of the Lake Erie and Western Railroad, in an area where very little drilling has been done in late years. There is a large amount of good looking territory in the vicinity for future development.

I. C. Robison is drilling what is termed a test about 2 miles southeast of Buckland, on the A. Sillin farm, Section 14, Moulton Township, Auglaize County. The Kelley Oil Co. is drilling a second test on the J. H. Harshbarger farm, Section 10, same township, 1 mile or so southwest of Buckland and within old territory developed in the early 90's.

The Bee Oil Co.'s second test, 750 feet from the north line and 200 feet from the east line of the Amos Waggoner farm, Section 11, Washington Township, Sandusky County, tapped the top of the Trenton at 1,285 feet and drilled 56 feet in the sand, getting a 15-bbl. pumper.

About 4 miles south of Perrysburg, and east of the Dixie Highway, in Section 29, Perrysburg Township, Wood County, the Oko Oil & Gas Co.'s No. 6, 1,140 feet from the north line and 750 feet from the east line of the George Deverna farm, pumped 27 bbls., with top of sand at 1,240 feet and drilled to a total depth of 1,282 feet. Charles F. Zeising and others are drilling a test on the Andrew Gensen lease, Section 26, Lake Township, same county, just south of the hamlet of Latcha and not far removed from the big wells recently brought in by Lants, Schulte and others on the Michaelson farm.

In the Elmore Field, in Harris Township, Ottawa County, the Ohio Oil Co.'s No. 14, 700 feet from the north line and 200 feet from the west line of the J. H. Bergman, Section 19, pumped 5 bbls. This well struck top of Trenton at 1,266 feet and drilled 102 feet in the sand.

Slagel & Johnston drilled a test in the southwest corner of the F. X. Eilerman farm, in the northwest quarter of Section 9, McLean Township, Shelby County, and near the two 20-bbl. producers on the McGrath farm, and got a duster. Sand was found at 1,252 feet and drilled 50 feet in the sand. Miller and others have a well nearing the sand on the Jane Ernest farm, Section 10, same township.

In Cynthian Township, Shelby County, Lee A. Watson's test, 300 feet from the south line and 900 feet from the east line of the J. Monnin farm, in the southeast quarter of Section 34, pumped 15 bbls. Sand was at 1,230 feet and drilled to a total depth of 1,287 feet. E. E. Laughner's No. 3, in the northeast corner of the Theresa Goffena farm, in the southeast quarter of Section 34, pumped 5 bbls.; top of sand at 1,230 feet and drilled into sand 35 feet.

Indiana Field

It is reported that several strings of drilling tools now working in the Allendale Field, of Wabash County, Illinois, will be moved to southwestern Indiana in the field southwest of Washington, in Veale Township, Daviess County, Indiana, where the Sargent-Hartman interests and others have some very good producing wells and a large acreage under lease that will be more thoroughly developed. Logan Township, Pike County, is also showing a slight increase in new work.

In Columbia Township, Gibson County, the Consolidated Oil Development Co.'s test, in the northwest corner of the E. G. Rich farm, in the southwest quarter of Section 14, proved a dry hole at a total depth of 1,446 feet. In Barton Township, the Gem Oil Corp. is drilling No. 1 on the John Smidtt farm, Section 17, and in Washington Township, same county, Bell Brothers are starting a test on the Joseph Armstrong, in M. D. 108 tract.

Beilman and others' No. 1, in the southeast corner of the C. E. Gilbert farm, in the southeast quarter of the southwest quarter, Section 16, Hamilton Township, Sullivan County, was a duster at a depth of 769 feet.

Skidmore and others are drilling No. 1 Walter Miley farm, Section 14, Logan Township, Pike County, and N. Darby and others are starting No. 1 G. Stewart, Section 23. The Ohio Oil Co. is drilling a second test on the Parker-Wilson farm, Section 16, Monroe Township, same county.

Illinois

The finding of a new sand in Bridgeport, Lawrence County, is one of the recent features of this field which was one of the greatest in the east some few years ago. The Record, of Lawrenceville, Ill., says, "Another oil sand in Lawrence County was discovered by the Ohio Oil Co. when a deep test conducted by the company on the Jess R. Middagh farm, 4 miles west of Lawrenceville revealed a hitherto unknown producing sand at a depth of 1,853 feet. The new sand was struck at a depth of about 100 feet deeper than any other sand in that vicinity. The oil was also accompanied by a fairly good flow of gas. The well filled up to about 200 feet soon after the drill was removed. The following morning 45 bbls. of oil was bailed out of the well without perceptibly lowering the level in the well. It was expected that the well would be put on the pump as soon as possible to determine about how much oil the well will produce without being shot. Oil men estimate the well would easily produce 100 bbls. a day when it is put on the pump, possibly considerably more. The location of the new sand is expected to give a decided impetus to production in this county as oil men are of the opinion that much of the oil territory is underlaid with this same new sand. The oil found is of excellent quality, being very similar to that found in what is known as the Kirkwood sand."

The Middagh well is No. 23 on that farm, which is in Section 32, Bridgeport Township, and was being drilled from its former depth of 1,760 feet, and owned by the Ohio Oil Co., which was making a deep test of it.

Bell Brothers and others are reported moving a rig for a very important wild-

(Continued on Page 102)

HOPEWELL POOL'S 50-BARREL WELL BEST OF WEEK IN KENTUCKY FIELD

By Whit
Staff Correspondent, Kentucky-Tennessee

GLASGOW, Ky., June 5. — Rather light producers were the result of the drill for the past several days in the Kentucky-Tennessee fields, with the exception of a 50-bbl. producer reported from the Hopewell or Crocus Creek district, on the Morgan farm along the line of Cumberland and Adair Counties.

An interesting report comes from the wildcat drilling on the Ben Russell farm, on Dunville Dome, near the town of Dunville, in Casey County. This test is reported around 400 feet in depth, passing through showings of both oil and gas. The rig is said to be fenced off to keep information from leaking out, but several of the large companies have their scouts in that area and should the well prove a commercial producer, it will be known just as soon as it strikes anything worth while. While it is not a commercial well yet by any means, numerous leases have changed hands at prices that would not mean much of a loss to the purchasers if the well proves a fluke. It is being drilled by Irwin, Anschuts and others and appears to be a choice location, which is on Goose Creek.

The wildcat well of the Martinsville Oil & Gas Co., on the Flint lease in Whites Bottom of Cumberland County, that had a nice showing has gone to water in a stray sand at 286 feet. An attempt will be made to exhaust the water and if not it will eventually be drilled to a greater depth.

Scarcity of water has caused the shutting down of many drilling wells in various parts of Kentucky. The western division suffers more from a water shortage than does the eastern division and rains are needed badly. In the Owensboro Field, one of the busy spots, work is sadly delayed on account of no water for drilling purposes.

Week's Work

A summary of the week's work in the Kentucky-Tennessee fields shows 25 completions, 20 producers with a flush of 180 bbls., and 5 dry holes. Compared with the previous week, this is a decrease of 8 completions, 4 less producers, 387 bbls. less in production and 4 less dry holes. The wells were distributed by counties as follows:

	Comp.	Wells	Prod.	Dry
Barren	8	6	46	2
Owensboro district	6	4	40	2
Morgan	4	4	21	0
Lawrence-Johnson	2	2	15	0
Allen	2	2	6	0
Cumberland-Monroe	1	1	50	0
Simpson	1	1	2	0
Tennessee	1	0	0	1
Total	25	20	180	5
Last week	33	24	567	9
Difference	8	4	387	4

Eastern Division

Eastern Kentucky results continue to show up rather light with only an occasional completion in the central Kentucky counties of Lee, Estill and Wolfe. Work has been at low ebb in Lawrence, Johnson and Magoffin Counties, but with improved weather conditions is now looking better, most of the old-time companies planning an immediate renewal of drilling operations. Morgan County is also in line for a more active development, especially along the Lawrence-Morgan, Johnson lines.

The Foreman Lumber Co., owner of acres in eastern Kentucky, is drilling deeper a well drilled to the 1,800-foot level by the Standard Oil Co. and expects to develop a pay sand around 2,000 feet. This test was started more than a year ago.

The Swiss Oil Corp., one of the large operating concerns of the state, is getting busy on its acreage in the North Weir Field of Lawrence and Johnson Counties and has close to a dozen strings at work. This company reports as completions for the week: No. 42 on the J. J. Gambill farm, in District 32 of the North Weir Field of Lawrence-Johnson Counties, good for 10 bbls., and No. 9 on the R. N. Sparks No. 2 farm, in District 22, good for 5 bbls. No. 43 on the J. J. Gambill, District 32, is drilling; No. 10 on the R. N. Sparks No. 2 farm, District 22; Nos. 41 and 42 P. P. Holbrook farm,

(Continued on Page 92)

The two Smith Separators are on Ostrand No. 1 and No. 2, Mehan Field, Pure Oil Co.

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Where Smith Oil and Gas Separators have proven their ability to handle high pressures successfully . . . sending the clean oil to the stock tanks and the gas to the lines and boilers.

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THE FIRST OF A SERIES OF IMPORTANT MESSAGES

CHAPMAN

TO THE OIL REFINING COMPANIES OF AMERICA

An Open Letter to Refinery Engineers

THE CHAPMAN VALVE MANUFACTURING CO.

WORKS AND MAIN OFFICE, INDIAN ORCHARD, MASS.

GATE VALVES
SLUICE GATES
FIRE HYDRANTS

203 HAMPSHIRE ST.
INDIAN ORCHARD, MASS.

Subject: Cutting Your Refinery Piping Costs

Gentlemen:

$12,041,500 was spent in 1925 for refinery piping maintenance - repairs and replacements on piping, valves and fittings. Much of this tremendous sum - to which you contributed your share - was a levy paid on equipment inadequate to the duty imposed.

One company counts its annual piping maintenance cost at $8.70 per 1000 Bbls. of crude run

That amount is needlessly high - better equipment would keep that cost down.

You can cut your valve maintenance costs 25 to 50 per cent, by standardizing on Chapman Chrome Nickel Steel Valves.

This long-service Chrome Nickel Steel Valve - with plugs and seat rings forged from chrome nickel steel - is the result of years of research.

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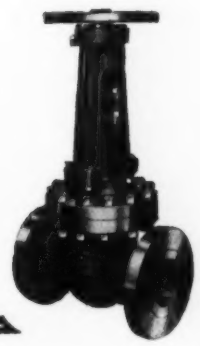
Write our Mr. Maher, today, for full particulars.

Yours very truly,

THE CHAPMAN VALVE MANUFACTURING CO.

VALVES



Good Ohio and West Virginia Wells

Licking, Knox and Holmes Counties and Big Injun Development in Clay County Best Producing Districts

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., June 7.—Development work in the eastern fields is not producing any sensations. Now and then a good producer is completed in some of the old district, mostly in the deep sand territory in southeast Ohio. For quite some time operators and producers have been looking for an advance in the Pennsylvania grade of crude. All refineries in Pittsburgh and vicinity are running to full capacity. The demand for gasoline is increasing by leaps and bounds and the year promises to be a record breaker.

Some Good Completions

The week of development work was not without the completion of some good producers. There were not many of them and none in the gusher class. The latter seems to be a minus quantity in the eastern fields. It is the exception when a well is completed having an initial production of 100 or more barrels. Since the first of the year the deep sand territory in southeastern Ohio has had a number and West Virginia but two.

During the past week, the Hope Construction & Refining Co. completed a test on the Susan A. Miner farm, in Lot 16, Hanover Township, Licking County, Ohio, that placed 95 bbls. to its credit the first 24 hours after drilled through and shot in the Clinton sand. In Section 21, Union Township, Knox County, the Pure Oil Co.'s second test on the W. D. Heaton farm, produced 80 bbls. the first 24 hours after completed and shot in the same formation.

West Virginia completed but one good producer. It is the South Penn Oil Co.'s No. 5, on the Clyde Atkinson farm, on Meadow run of Goose Creek, Grant district. It is a Big Injun sand producer and flowed 95 bbls. naturally, the first 24 hours. In the Big Injun Sand Pool in Henry district, Clay County, the South Penn Oil Co. got two fair producers at Nos. 4 and 7 on the H. R. Kyle farm. One is good for 25 bbls. and the other 30 bbls. a day. In the same district, the Virginian Gasoline & Oil Co. got a 40-bbl. producer at No. 7 on the Brown & Co. farm. This pool is now furnishing more new production than any other in West Virginia.

In New Haven district, Mason County, the Ohio Fuel Oil Co. has a wildcat producer on the McMillen heirs' farm that has been averaging 6 bbls. a day for some time. The oil was developed in the Berea grit and this find may lead to something better. The same company is starting a second test on the same farm. All previous production is far removed from this well.

Ohio Completions

In the southwest quarter of Section 21, Harrison Township, Perry County, the Standard Hocking Coal Co. has drilled a second test on its property through the same formation. They swabbed 55 bbls. the first two days. It will probably make a 10 or 15-bbl. pumper.

In the southeast quarter of Section 23, Killbuck Township, Holmes County, the Ohio Oil Co.'s test on the Ellsworth Middaugh farm is a duster in the Clinton sand, having developed no oil or gas in the formation named.

In the northwest quarter of Section 4, Washington Township, Hocking County, the Rattlesnake Oil & Gas Co. has completed in the Clinton sand a test on the Emily Campbell farm. It is a duster at a total depth of 2,950 feet. At this location only a very little sand was encountered.

Guernsey County Tests

In Adams and Cambridge Townships, Guernsey County, there is a lot of new work under way and starting. The Ohio Fuel Gas Co. is the most active in this county. Its operations follow: No. 1 Riley Moore and George Bell, location; No. 1 L. Shriver, drilling at 4,563 feet; No. 1 J. C. Archer, No. 1 Albert Woodburn and No. 1 W. L. Ford, drilling at 3,502, 2,500 and 1,400 feet, respectively; rigs up for No. 2 W. L. Ford, No. 1 Henry M. Stock; and No. 1 Cina Forney. The Ohio Fuel Supply Co. has a rig up for a test on the Cliff McFarland farm. The Ohio Oil Co. is rigging up at No. 3 on the James Mercer farm. Keith and others have made a location. The Detroit Edison Co. has made a location on the Wayne Mining Co.'s property.

In York Township, Morgan County, a section that has been furnishing more good producers than any other, the Swingle Oil & Gas Co. has completed in the Berea grit No. 7 on the H. D. Pletcher farm, a gasser good for 600,000 feet. In Section 5, Deerfield Township, the Daily Oil Co. has completed in the same formation a test on the J. A. Steimer estate. It is a duster and has been abandoned.

In the southwest quarter of Section 22, Monroe Township, Perry County, the old Corning Field, the John Holden estate has completed and shot in the Berea grit No. 22 on the Rodgers Brothers' farm and produced 8 bbls. the first 24 hours. In Section 3, Perry Township, Licking County, the Hope Construction & Refining Co. has a light gasser in the Clinton sand at a test on the Wesley Martin farm.

Drilling Test Wells

In Section 18, Richland Township, Fairfield County, F. C. Sharpnack and others have started to drill a second test on the J. G. Ruff farm. In Washington Township, Monroe County, the Sylvan Oil & Gas Co. has a rig completed on the Howard Piatt farm. In Reading Township, Perry County, the Planet Oil Co. and others are drilling on the O. J. Miller farm.

The Ohio Oil Co.'s test on the T. B. Speer farm is drilling at 1,600 feet. The location for a second test on the same farm has been made. The Logan Gas Co. is rigging up on the Seward R. Williams farm. The same company has rig material at a location on the Howard Beck farm. The Pure Oil Co. is still idle at a test on the Elizabeth Irwin farm. The Big Lime Oil Co. is drilling at 3,300 feet on the William Knight farm. T. A. Matthews' test on the Marshall Gibson farm is drilling at the same depth. Stoltz & Co. are drilling at 1,200 feet. The test on the R. A. McBride farm is drilling at 1,600 feet.

Light Wells in Licking County

In Section 18, Fallsbury Township, Licking County, the Leonard Oil & Gas Co.'s Nos. 3 and 4 on the Myers estate, are each good for 3 bbls. a day in the Berea grit. In Jackson Township, Section 21, the Arkansas Fuel Oil Co. has a 5-bbl. pumper in the same formation at No. 15 on the L. V. Dugan farm. In Section 3, Newton Township, the Ohio Fuel Supply Co.'s No. 3 on the O. Hanberger farm is good for 3 bbls. a day. No. 4, on the same farm, is due in the sand. In Section 2, same township, Harry Farmer and others have a very light pumper at a second test on the Orie Pound farm. In Section 10, Bowling Green Township, the Midland Oil Co. has a duster in the Clinton sand at a second test on the A. D. Cooperrider farm. In the same township, the same company has the rig up for a test on the Edward Hupp farm. In Hopewell Township, the Hope Construction & Refining Co. is fishing at 2,750 feet at a test on the James Uffner farm.

Late Completions

The deep sand territory in southeastern Ohio rounded out the week of development work by the completion of a good producer. There was but one other completion, a light gasser in the Fisher Pool, Athens County.

In Lot 10, Hardy Township, Holmes County, the East Ohio Gas Co. completed in the Clinton sand a test on the Christian Schlarb & Co. farm and good for 95 bbls. a day.

In Section 19, Liberty Township, Washington County, W. P. Beeson and others have started to drill a test on the George E. Epler farm. In the old Corning Field, Section 10, Monroe Township, Perry County, John Denman & Son are drilling No. 21 on the Annie and Mary McGowan farm. In the northeast quarter of Section 32, York Township, Athens County, the Pure Oil Co. has completed and shot in the Berea grit No. 12 on the Ira N. Baringer farm. It is a 6-bbl. producer.

In the Fisher Pool, Lot 75, Athens Township, Athens County, the Southern Oil Co. has completed and shot in the same formation No. 5 on the D. M. Murphy farm. It is a near duster. In Waterloo Township, F. L. Gunther is drilling a test on the Lafayette Hewitt farm.

In Alexander Township, Athens County, the Biddle Oil & Gas Co. is drilling No. 7 on the Frank Biddle farm. In Alexander Township, Gross & Frebault are drilling on the Daniel Higgins farm. In Section 20, Harrison Township, Perry County. Perry Sturm and others are building a rig for a test on the Friehl heirs' farm. Schnedker Brothers have started to drill on the W. C. Fletcher farm. In Section 4, Cline Brothers have a rig up on the S. F. Guy farm. In Section 20, Craig Adair has started to drill on the P. Long farm.

In Section 10, Perry Township, Licking County, the Hope Construction & Refining Co. has completed in the Clinton sand a test on the G. H. Brown farm. It has not been shot and produced 64 bbls. the first 24 hours. When shot its production should be materially increased.

Noble County

In the northwest quarter of Section 19, Enoch Township, Noble County, Albert P. Sheets & Co. have a duster in the Macksburg 500-foot sand at No. 3 on the Andrew Astadt farm. In the southwest quarter of the same section, A. S. Rucker & Co. have completed in the Buell Run sand No. 3 on the John N. Boyse farm. A good quality of sand was found at this location but no oil.

Medina County

In Tract 17, Lot 5, Chatham Township, Medina County, the Ohio Fuel Supply Co.'s No. 13 on the E. T. and A. R. Clapp farm is a duster. In Tract 15, Lot 2, same township, Harry Dempsey's second test on the Edward Goodyear farm is also a duster. In Lot 9, Franklin Township, Licking County, J. T. Bebout's No. 3 on the W. E. Dispnett farm is a very light pumper in the Berea grit.

Columbiana County

In Section 21, Knox Township, Co-

(Continued on Page 98)

LEASING SPREADING AT SAGINAW; TO TEST SOUTH, EAST AND WEST

By Whit

SAGINAW, Mich., June 4.—Leasing activities are spreading on all sides of Saginaw of late and if wells are drilled according to lease contracts, the field will be a busy one during the next several months. So far the Saginaw Field has made an excellent showing as no failures have been recorded out of nine completions, which is a very good record not alone for Michigan, but for most any wildcat territory.

No new completions have been made since the Saginaw Prospecting Co.'s sixth well, No. 1, on the Northmoor subdivision to Saginaw, in Section 14, Saginaw Township, Saginaw County, and almost a direct offset to the company's discovery well. This well is reported at 25 bbls. flush from the Berea sand at the usual depth. Same company is drilling its seventh well, which is No. 1 on the John Palvas 19 acres, in the northeast quarter of Section 14, and an offset to the west of the Bliss Petroleum Co.'s initial well on the Casper Ulrich farm. Its No. 8, which is No. 2 on the city of Saginaw's land, known as the Deindorfer woods, just south of the railroad and directly south of No. 1 on the same acreage, which was the discovery well, is about due to start drilling. No. 9 well, or No. 1 on the John Bruner farm, is southeast from the Sun Oil Co.'s well and on the Shattuck Road, in Section 11.

F. H. Ruesch, a representative of the Gardner Petroleum Co., of Tulsa, Okla., states that the first well to be drilled by his company on the Schwannecke farm, on the Hess Road southeast of the city will start with a 12½-inch hole in case any attempt is made to test out the lower stratas.

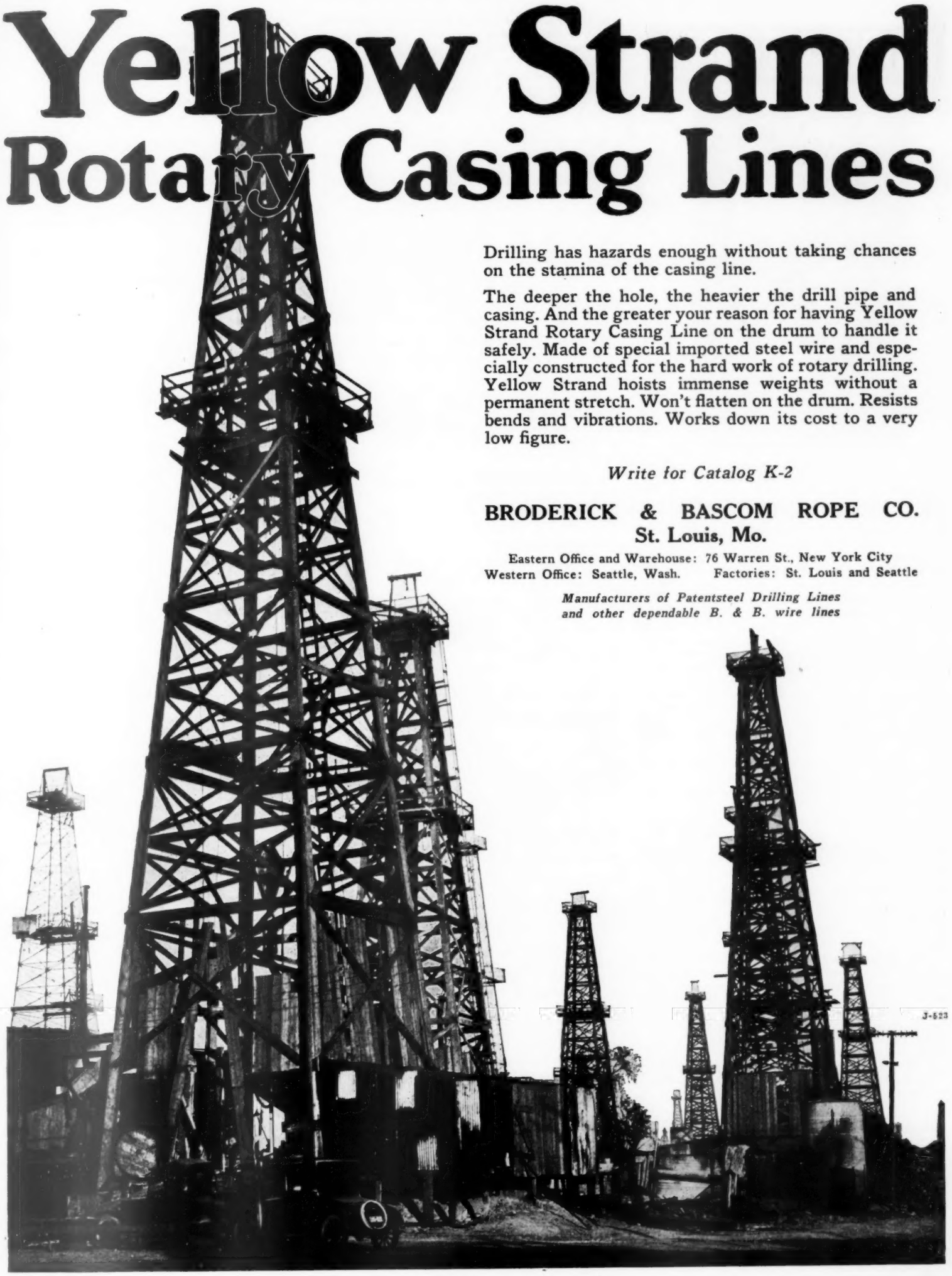
According to advices the contract for this test has been let to Malin Clover, of Lancaster, Ohio, a well known Central Ohio contractor who knows the game, having spent many years in the Clinton sand area of the Buckeye State. Mr. Clover is now in Saginaw looking over the field preparatory to starting the test. This will be a very important test and will mean much for the Saginaw Field should it prove a commercial producer. Heretofore all the Saginaw oil prospecting in the present development has been in the territory north and northwest of the city. The trend of oil operations since the discovery well of the Saginaw Prospecting Co. in Deindorfer woods last August, has been to the north and northwest. Several locations have been chosen more than a mile away from the initial venture in these directions, but the prospecting so far has gone only a short distance south or east.

Another Test to West

Another important test which just started drilling a few days ago for V. M. Vorhees and others on the Mrs. Jane Marshall farm, about half a mile west of the city limits of Saginaw, on the state road in the southeast quarter of Section 16 and 2½ miles west and 1½ miles south of the discovery well and the farthest advanced well yet to be started to the westward. Another test to the westward is that of the Bliss Petroleum Co. in No. 1 on the southeast

(Continued on Page 102)

Yellow Strand Rotary Casing Lines



Drilling has hazards enough without taking chances on the stamina of the casing line.

The deeper the hole, the heavier the drill pipe and casing. And the greater your reason for having Yellow Strand Rotary Casing Line on the drum to handle it safely. Made of special imported steel wire and especially constructed for the hard work of rotary drilling. Yellow Strand hoists immense weights without a permanent stretch. Won't flatten on the drum. Resists bends and vibrations. Works down its cost to a very low figure.

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J-523

MEN KNOWN IN OILDOM

John M. Lovejoy

John M. Lovejoy, vice president and general manager of the Amerada Petroleum Corporation, was born in July, 1889, and must have come from a line of ancestors who loved to rove the briny deep, for the records show that he was captain of the freshman crew at college, and now, when business permits, he spends his vacation jockeying a yacht up and down Long Island Sound.

After graduating from the School of Mines, Columbia University, in 1911, as a mining engineer, Mr. Lovejoy went to Chuquicamata, Chile, where the Guggenhein interests were operating a mining property. After a few months at Chuquicamata he left for Huantijaya, one of the oldest and most productive silver mines of the world. After two and one-half years in South America, Mr. Lovejoy returned to the States, and after working for a year in the Gilpin, Colorado mining district, went in 1914 to China on his first venture into the oil business.

Returning to the States, Mr. Lovejoy found the activities of a "rockhound" quite different in Wyoming, where he went to work for The Texas Company on his return.

Not content with doing surface work, Mr. Lovejoy secured a job as roustabout at Electra, and was still doing actual field work when he joined the first officers training corps at Madison Barracks, New York. He crossed in February, 1918, as first lieutenant, attended the French artillery school at Saumur, was attached to the 55th F. A. Brigade, and soon after was promoted to captain. He had the good fortune to command in the San Mihiel and Argonne offensives.

After he was mustered out in 1919, Mr. Lovejoy was sent to Oklahoma by E. De Golyer, vice president of the Amerada Petroleum Corporation, with the title of "agent". The then infant Amerada Petroleum Corporation had no production, but Mr. Lovejoy picked up a few leases and started to drill. The first producing well was in the Beggs Field, and from that time the progress of the corporation has been gradual but sound and sure.

In January, 1926, Mr. Lovejoy was made vice president, and general manager.

* * *

PERSONAL PARAGRAPHS

Lee Combest, of Kentucky, is spending some time in Philadelphia, Pa.

* * *

F. W. Burford, vice president of the Crystal Oil Refining Corporation, Shreveport, is back at his desk.

R. C. Gasser was elected a director of Mexican Seaboard Oil Company to succeed T. J. Broidrick at the annual meeting.

* * *

Ralph Arnold, operator and geologist of California, is in Great Falls, Mont., making a survey of the Montana situation.

* * *

D. E. Buchanan, vice president of the Chestnut & Smith Corporation, Tulsa, Okla., was on a business trip in Shreveport, recently.

* * *

R. M. Keller of the Cooper Petroleum Company, Houston, Tex., spent several days in Shreveport, La., last week in the interest of his company.

* * *

B. L. Meece has returned to Grand Isle, Neb., where he will again represent the Quaker Petroleum Company of Omaha, in western Nebraska.

* * *

J. A. Talbot, president of the United Oil Company, was in San Francisco to attend the launching of the Richfield Oil Company's new tanker Richlube.

* * *

Mr. Stead, of the Alto Oil Co. of West Fork, Ky., spent a few days looking over the shallow field along the Adair-Cumberland County lines in Kentucky.

* * *

M. J. Grogan, general sales manager of the Louisiana Oil & Refining Corporation, Shreveport, La., has returned from a business tour in the south part of the State.

* * *

W. H. Gaither, district manager for the National Transit Pump & Machinery Company at Houston, Tex., has returned from a business trip to Dallas and Fort Worth.

* * *

George F. Getty of Los Angeles, a pioneer Mid-Continent operator, and president of the Minnehoma Oil Company, is in the East after spending two weeks in Tulsa.

* * *

Lew Klein, who has been in South America for the past year, as the Venezuelan representative of the Continental Supply Company, has returned to the United States.

* * *

Frank R. Parsons, of the United States Geological Survey, recently visited the Casper offices of the Mineral Leasing Division and has returned to Washington, D. C.

* * *

Austin E. Hill, who has been in the offices of the Mammoth Oil Company in Wyoming, has been transferred to the accounting department of the Sinclair Oil Company at Tulsa.

* * *

R. R. Brinkman, assistant sales manager of the Shreveport Producing & Refining Corporation, has returned from a business tour that carried him through Louisiana and Mississippi.

* * *

H. M. Baskerville, Minneapolis, Minn., and R. N. Lambert, Tulsa, Okla., both connected with the W. H. Barber Company, of Minneapolis, made a recent business trip to Shreveport, La.

* * *

Jack Sickler, formerly with the Mid-Northern Oil Company, but now with the geological department of the Union Oil Company of California, is a visitor in Montana and southern Alberta.

* * *

A. E. Watts of New York City, vice president of the Sinclair Oil Corporation, and one of the receivers of Teapot Dome appointed by the Federal Court at Cheyenne, Wyo., has been visiting the field.

* * *

L. G. E. Bignell, of the Parkersburg Rig & Reel Company, has returned to the Mid-Continent area after a trip through the Rocky Mountain section. He reports conditions good in the territory he has visited.

* * *

Mr. Cook of the Paragon Development Company, accompanied by Mr. Smith, his engineer, and Mr. Lang of Pennsylvania, were recent visitors to the Hopewell Pool, along the line of Adair and Cumberland Counties, Kentucky, where some nice wells are being found at shallow depths. It might be possible that the Paragon Company will extend its gathering lines to the new pool.

William C. McDuffie, vice president of the Shell Company and production manager for the various Royal Dutch interests, returned to Los Angeles after an absence of three months spent in South America.

* * *

R. A. Sperry, general manager of the General Petroleum Company, was in Bakersfield, Calif., last week looking over the Poso Creek and Kern River front, in which areas the company recently acquired acreage.

* * *

R. C. Grinnell, president of the Fluid Packed Pump Manufacturing Company of Santa Fe Springs, Calif., has been visiting the Robert N. Atmore Company of Tulsa, Mid-Continent distributors for his products.

* * *

M. O. Corey, formerly a contractor in the Salt Creek Field, was a Casper, Wyo. visitor, looking after the shipping of a string of tools to Utah where he is to drill a wildcat for the Marland Oil Company.

* * *

Charles L. Reed, field scout for the Marland Oil Company of Colorado with Casper, Wyo. headquarters, has left by motor with Mrs. Reed and their two sons for a 10-day visit at their former home in Okmulgee, Okla.

* * *

William A. Miller, well known oil operator and contractor for many years in the Trenton Rock fields of Ohio and Indiana, is now located at Jacksonville, Fla., where he is spending his vacation with his daughter.

* * *

Thomas J. Crumpton, vice president and general field manager of the California Petroleum Corporation, is planning an extended holiday. On July 1, 1926, he will relinquish the reins as active production chief of the company.

* * *

Claude Smith and I. N. Bettison, well known coastal contractors, now in the Southwest fields, are in Houston, Tex. Mr. Smith has the contract to drill a wildcat test for Benedum & Trees, southeast of the Humble Pool.

* * *

Dean E. Winchester, for a number of years connected with the United States Geological Survey and the author of several books on geology, has joined the staff of J. H. Clark & Company, oil operators at Amarillo, Tex.

* * *

L. B. Webster, of Crawford and Webster, of Shreveport, La., has returned to Columbia, Adair County, Kentucky, where he will make his headquarters while developing holdings along the Cumberland-Adair County line.

* * *

William Richards, who figured in the early development of Kevin-Sunburst Field, has returned to the north country and will again engage in drilling. He drilled a dry wildcat in Happy Hollow, Lake Basin area, last fall.

* * *

Jo P. Capeau, Sr., one of the first oil scouts in his early days, co-discoverer with Joe Haymaker of the Jojo Pool in McKean County, Pa., whose home is now on Long Island, is spending some time in north Texas buying leases and royalties.

* * *

David Donoghue, of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., was a recent visitor to the Coastal region. Mr. Donoghue is one of the best known geologists in the State, one of the few who is familiar with the geology of the whole State by reason of his wide experience.

* * *

Mr. McLoud, of Moore & McLoud of Houston, Tex., spent several days looking over the Hopewell Pool, in northern Cumberland and southern Adair Counties, Kentucky, and probably will return to the new shallow field in the immediate future and develop some of his firm's holdings, recently secured.

* * *

C. B. Taylor, chief geologist for Kansas for the Sinclair Oil & Gas Company with offices in Wichita, Kans., has been promoted to the Cisco, Tex. area. He is to be succeeded in Kansas by L. W. Kesler, formerly of Winfield, who has been in the geological department of the Skelly Oil Company for some time.

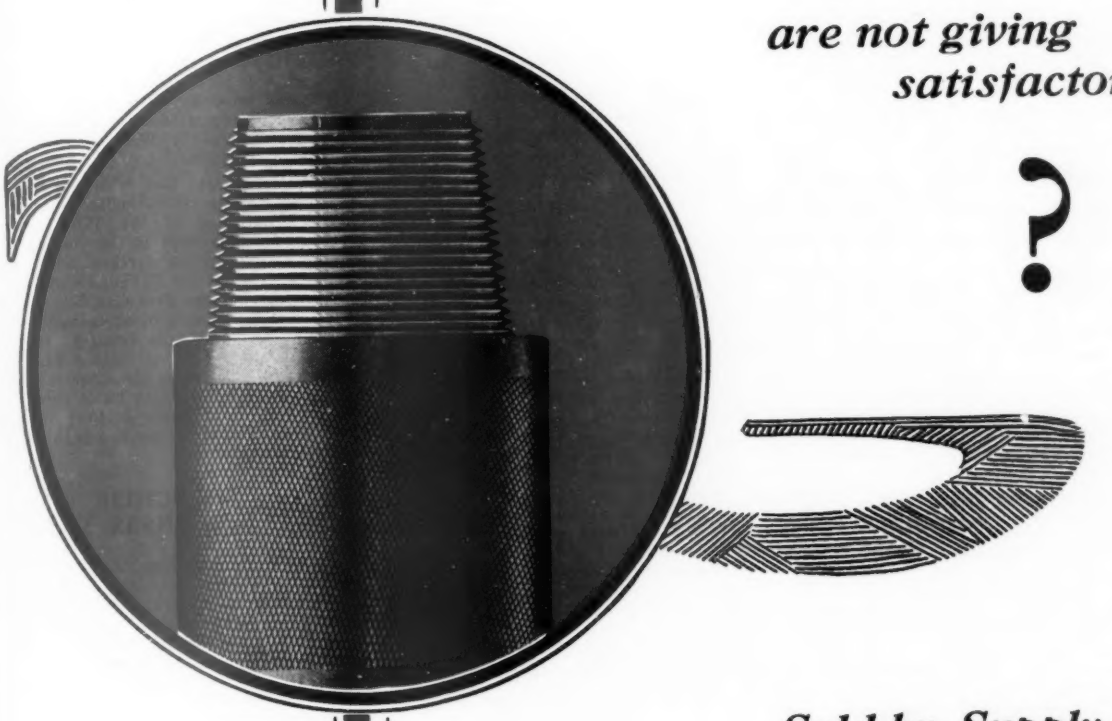
XUM

CAN YOU NAME A ROTARY FIELD IN THE WORLD WHERE—

HUGHES TOOL JOINTS

are not giving satisfactory service

?



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NATURAL GAS DEVELOPMENTS

Many New Gas Lines And Extensions in Southwestern States

HOUSTON, Tex., June 5.—There never was a time in the southwestern states when commercial gas companies were as active as at present and apparently no difficulty is experienced in financing new lines or extensions of existing lines.

Eastern financial institutions report investors are partial to natural gas securities and bonds and stock flotations are readily absorbed. Two gas lines, representing an investment of approximately $13,500,000 have been completed to Houston and are now delivering natural gas from fields in Refugio and Live Oak Counties. One of these lines, the Houston Pipe Line Co., a subsidiary of the Houston Oil Co., is now doing the preliminary work toward an extension of its main from Lucas, Live Oak County, into Webb and Jim Hogg County gas districts. The extension will be about 100 miles of pipe.

The other company—the Houston-Gulf Gas Co., known as the Moody-Seagraves promotion, whose stock is listed on the Pittsburgh Stock Exchange, is contemplating an extension of its main from the present terminus in the Refugio County gas field, southwestward into Jim Hogg and Webb Counties.

Interests identified with the Standard Oil Co. of Louisiana are laying some 175 miles of 22-inch pipeline from the Monroe, La., gas fields to Baton Rouge. The big Standard refinery there will burn 65,000,000 feet per day when the line is ready to deliver gas, which will be some time next fall. This line will represent an investment of about $10,000,000.

The Magnolia Petroleum Co., with a 16-inch line from the northeast Texas and north Louisiana gas fields to Beaumont, is said to have plans for a second line from the same northern gas fields through to Port Arthur to furnish gas to the big refinery plants of The Texas Company and Gulf Refining Co. there. The present line is delivering from 35,000,000 to 40,000,000 feet per day to the refinery of the Magnolia Petroleum Co. at Beaumont and furnishing gas to the local gas company for domestic consumption.

The Southern Natural Gas Co. has some 160 miles of main line from Webb County to San Antonio.

The Border Gas Co., a subsidiary of The Texas Company, has a line from Zapata and Webb Counties to Laredo. It is the oldest of the natural gas companies in the Southwest, being in business for about 18 years. It is the only concern in the country that exports natural gas, having a line across the Rio Grande River to Nuevo Laredo, Mexico.

The natural gas lines now in operation being laid and contemplated represent approximately an investment of $45,000,000 in south, southwest Texas and Louisiana, not including the lines into Shreveport which have been in operation for years.

The big refining companies on the Gulf Coast are responsible for the encouragement given natural gas transportation companies and back of that the reason is found in improved refinery methods. A few years ago these plants used fuel oil under the stills and boilers. Now the fuel is cracked and low grade is cracked under pressure and natural gas supplies the fuel.

As has been said, the Magnolia Co. uses from 35,000,000 to 40,000,000 feet per day and the Standard Oil Co. of Louisiana will use 65,000,000 feet. The two big plants at Port Arthur will require about the same when another line is connected, the present line of the Magnolia Gas Co. carrying its capacity. On the Houston ship channel, the plant of the Humble Oil & Refining Co. at Baytown is now burning around 17,000,000 feet per day and will soon be equipped to burn 25,000,000 feet. The Galena-Signal Oil Co.'s plant is burning from 10,000,000 to 12,000,000 feet per day and the Sinclair Oil Refining Co.'s refinery about 10,000,000. It has just been connected to the main of the Houston-Gulf Gas Co.

In addition to the refineries, the Gulf-Texas Sulphur Co. burns 16,000,000 feet per day at its spulphur plant at Gulf, Matagorda County, supplied by the Houston Pipe Line Co. Other sulphur plants are located at Freeport and Hoskins Mound, Brazoria County, owned by the Freeport Sulphur Co. at Sulphur, La., owned and operated by the Union Sulphur Co. The latter two companies are using Mexican fuel oil, operating to capacity they will burn an average of 4,000 bbls. per day each. "Mining" of sulphur is accomplished by what is known as the Frasch method, devised by the late Herman Frasch, for many years located at Lima, Ohio, as chemist for a refinery there. The sulphur wells are drilled and cased the same as oil wells. Superheated water is then pumped into the wells and the sulphur melted and withdrawn in a semi-liquid state. A huge battery of boilers is required to generate the superheated water which in turn means an enormous amount of fuel.

The two Houston gas companies have made a rate of 20 cents per 1,000 feet to industries on natural gas, which is very low and enables the refineries to discard fuel oil and low grades of crude. If the gas fields should decline rapidly it is doubtful if this rate can be maintained for any prolonged period of time.

Immense natural gas projects have been outlined for the new Panhandle region of Texas. The Lone Star Gas Co. has announced a line from Amarillo to connect with Wichita Falls. The Upham interests are reported to have let a contract to the Hope Engineering Co. for a line from the Panhandle to Wichita Falls territory. An eastern syndicate is said to be figuring on a line from the Panhandle to Kansas City, a distance of some 400 miles. The projected line to Denver has apparently been abandoned for the present.

Oil Lines

Jumping from gas lines to oil lines, the 8-inch line of the Magnolia Pipe Line Co. from the Arkansas and north Louisiana fields to the Magnolia Co.'s refinery at Beaumont, is now as far south as Jasper, Tex., in Jasper County. The company has started a preliminary survey for an extension of its Luling line southwestward to Webb and Jim Hogg Counties, a distance of 180 miles. The present 8-inch line from the Luling Field east to the Beaumont refinery is the only all-welded oil line in the country.

CENTRAL OHIO GAS OPERATORS ARE BUSY IN VIRGIN TERRITORY

WOOSTER, Ohio, June 7.—Since the last report from the Central Ohio gas field, there were five new completions reported, two of which were dry and three gas producers, 24 new wells started drilling and stakes set for 14 new locations which means that the large gas companies are doing their bit toward making the area one of drilling activity. All are making a strenuous attempt to open up new productive fields to make up for the drain in the older districts. Just at this time the territory in Guernsey, Cochocton and parts of Washington County are showing the best gassers, due to the territory being virgin, although some very fair gas wells are being found in the old producing areas and on the edges of the territory that has been producing for more than 20 years.

The field around Cleveland in Cuyahoga County is getting a nice play for gas at this time, there being close to a dozen strings of tools running in Dover, Strongville and Middleburg Townships, a little in advance of the work done there a few years ago when the big town lot boom was on at the west side of Cleveland.

Adams Township, Guernsey County, bids fair to be the most active township in the central Ohio area. The leading operating concerns are the Logan Gas Co., Ohio Fuel Gas Co., and the Detroit Edison Co., as well as the Ohio Oil Co. Several nice gas wells have been found in the township, and it is due to that fact that there are several wells now drilling and many locations staked out for new wells.

Coshocton County's play is mostly confined to Perry and Newcastle Townships, where results have been obtained by the drill and new work is spreading out into Monroe, Pike and Linton Townships, same county. Barlow Township, Washington County, is another spot where the gas industry is pushing development work, the Muskingum Gas Co. having drilled a large number of gas wells and other companies have been busy.

The Ohio Oil Co.'s No. 1 on the Finley C. Keith farm, Section 23, Adams Township, Guernsey County, is a very fair gasser as is its No. 1 on the Alice B. Mehaffey farm, Section 17, same township. The Ohio Fuel Gas Co. has started the drill at a test on the W. L. Ford, Section 22, and made a location for a test on the Henry M. Stock farm. The Detroit Edison Co. staked a location for a test on the Wayne Mining Co.'s tract. In Wheeling Township, same county, the Logan Gas Co. staked a location for a test 735 feet from the north line and 1,100 feet from the west line of the Howard Beeks 140 acres, Section 7.

(Continued on Page 92)

CONSTRUCTING LINE FROM WASKOM FIELD

SHREVEPORT, La., June 5.—The Commercial Natural Gas Co. has started construction work on a 6-inch gas line running from its main line drawing from the Waskom Field to Tyler and South Marshall, Tex.

The line will be welded and pipe is strung along the right of way waiting for ditching machines. Ditching and covering work started a few days ago. The completion of the line is expected within a few weeks. Following its completion a 6-inch extension line will be laid to Hallsville, Tex.

GAS COMPANY ACCOUNTABLE

In the case of Monnamaker vs. Kay County Gas Co., decided by the Supreme Court of Oklahoma, the court held that a gas company which supplies gas to a house through its pipe lines and has control of the apparatus for cutting off the gas, when notified that gas is escaping into the building, owes the duty to the owner of the building to exercise reasonable diligence to cut off the gas from the building. It is immaterial that the gas may be escaping from the pipes of the owner or occupant of the building.

GAS LINE CONTRACT FOR UPHAM COMPANY

WICHITA FALLS, Tex., June 5.—A contract involving the expenditure of $4,000,000, said to be the second largest ever signed in Wichita Falls for a construction job, was closed when D. A. Upham, president of the Upham Gas Co., concluded an agreement with R. L. Lord of the Hope Engineering & Supply Co. of Ohio, for the construction of the 16-inch gas main from the Shamrock gas fields to Wichita Falls.

The contract provides for the construction of 175 miles of line from the Wheeler County gas fields to Wichita Falls, furnishing gas for towns along the route. Work is expected to begin within the next week.

It is planned to put three main line crews in the field. One or two river crossing crews is also expected to be employed on the new line. Between 800 and 1,000 men will be employed on the pipe line.

Much of the pipe and material is now on the ground and the balance is on the way. Crews will be started at Shamrock, Vernon, Quanah and Wichita Falls, and the work will be rushed to completion as rapidly as possible. The Upham company's contract provides for the delivery of industrial gas in Wichita Falls by September 1, 1926.

The Upham Gas Co., with municipal franchises in the Panhandle, has announced purchase of the Whittington Globe and Angus wells in the vicinity of Shamrock and in the farthest east gas producing area of the Panhandle district. Officials of the Lone Star Gas Co., which some weeks ago announced intention of entering the Panhandle country, report that an 18-inch pipeline costing $4,000,000 is to be laid during the summer from the Panhandle to Wichita Falls, there to connect with trunk lines to Fort Worth and Dallas. Work on the line is to begin early in June.

ASK GAS FRANCHISE IN ARKANSAS TOWNS

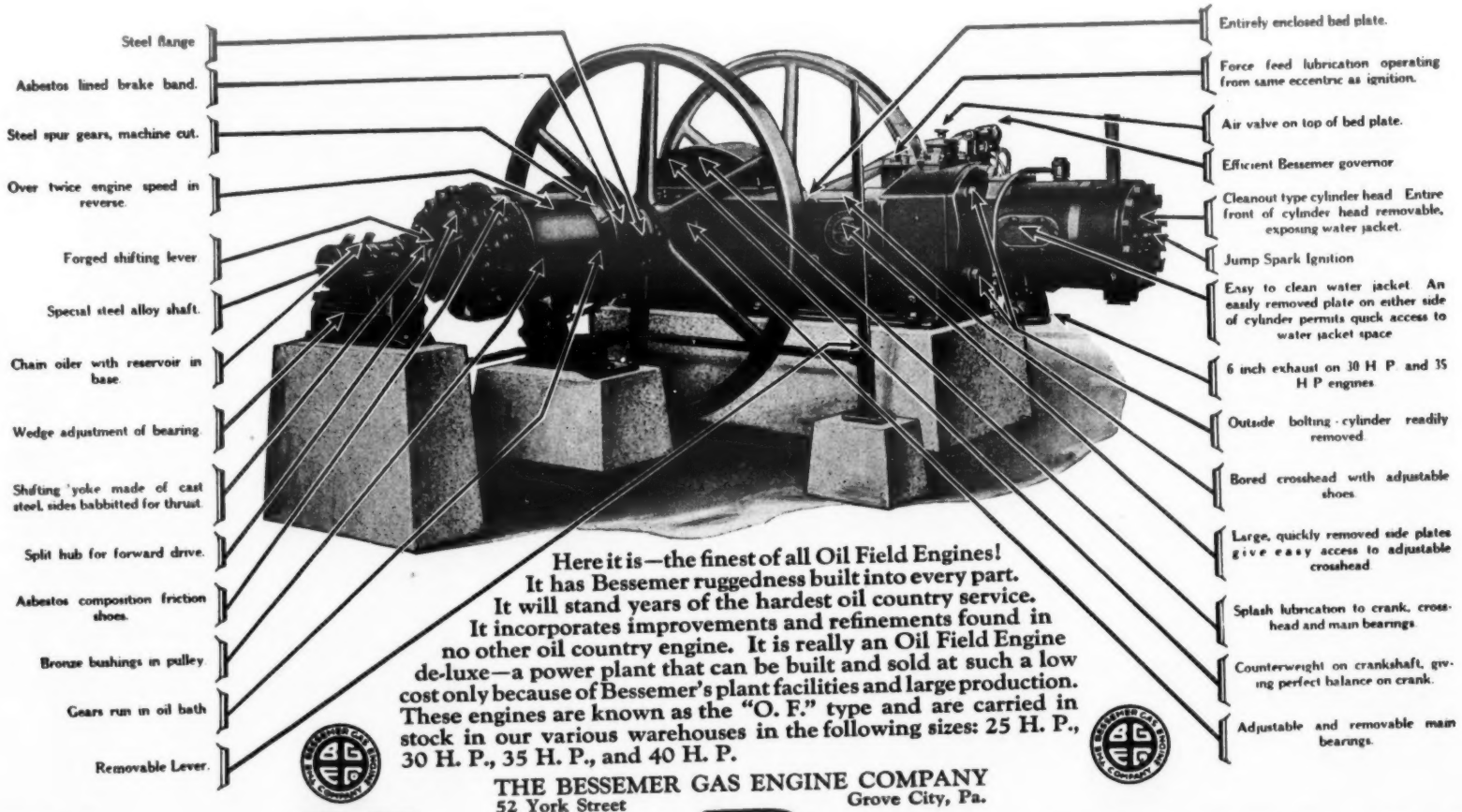
LITTLE ROCK, Ark., June 5.—The Morgan Utilities, Inc., of Little Rock, among the larger natural gas distributing concerns of Arkansas of which S. R. Morgan is general manager, has applied for a natural gas franchise at Conway, Ark. It promises to begin laying pipe within 90 days after receiving the franchise and to have the distributing system in operation in nine months. Gas would be secured from the Clarksville Field. Franchises are to be applied for at Dardanelle and Booneville.

An application for a franchise at Conway made some time ago by W. S. Cazort of El Dorado, a former Oklahoma operator, is pending. Cazort, who expects to get gas from the Clarksville Field, also has applications pending at Russellville and Morrillton.

CONTROL OF GAS WELLS

Information obtained in field studies made by engineers of the petroleum experiment station of the Bureau of Mines, Bartlesville, Okla., indicates that large savings of natural gas can be effected by scientific methods of recording conditions in gas wells, as these methods indicate conclusively where leaks are occurring. Laboratory work on the flow of air, gas and water through sandstone has been completed at this station. This experimental work has been very successful and checks the results of field tests on the control of water in gas wells. A bulletin on the care and operation of gas wells is now in course of preparation.

XUM


Steel flange
Asbestos lined brake band.
Steel spur gears, machine cut.
Over twice engine speed in reverse.
Forged shifting lever
Special steel alloy shaft.
Chain oiler with reservoir in base
Wedge adjustment of bearing
Shifting yoke made of cast steel, sides babbitted for thrust
Split hub for forward drive.
Asbestos composition friction shoes.
Bronze bushings in pulley
Gears run in oil bath
Removable Lever.
Entirely enclosed bed plate.
Force feed lubrication operating from same eccentric as ignition.
Air valve on top of bed plate.
Efficient Bessemer governor
Cleanout type cylinder head Entire front of cylinder head removable, exposing water jacket.
Jump Spark Ignition
Easy to clean water jacket An easily removed plate on either side of cylinder permits quick access to water jacket space
6 inch exhaust on 30 H P and 35 H P engines
Outside bolting - cylinder readily removed
Bored crosshead with adjustable shoes
Large, quickly removed side plates give easy access to adjustable crosshead
Splash lubrication to crank, crosshead and main bearings
Counterweight on crankshaft, giving perfect balance on crank.
Adjustable and removable main bearings.

Here it is—the finest of all Oil Field Engines!
It has Bessemer ruggedness built into every part.
It will stand years of the hardest oil country service.
It incorporates improvements and refinements found in no other oil country engine. It is really an Oil Field Engine de-luxe—a power plant that can be built and sold at such a low cost only because of Bessemer's plant facilities and large production. These engines are known as the "O. F." type and are carried in stock in our various warehouses in the following sizes: 25 H. P., 30 H. P., 35 H. P., and 40 H. P.

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California Branch: 727-728 Standard Oil Building, Los Angeles

EQUIPMENT AND SUPPLIES

DENVER CONCERN MAKES WELL CLEANING DEVICE

The Stearns-Roger Manufacturing Co., of Denver, Colo., manufacturers of oil field specialties, is offering a well cleaning device known as the Clark Sand Cleaner. It consists essentially of two special bits, a four-prong bit and a star bit. On each of these bits is a flapper valve that traps the mud or sand in the dumper chamber after the cleaner has been lowered into the well. After the cleaner is raised and lowered several times, the contents that have been forced into the dumper chamber are dumped on the surface. This is done by the simple process of rotating the outside sleeve of the dumper until the opening in the outside sleeve is opposite the opening in the inside sleeve.

The star bit is used in cleaning caves, bridged holes, hard sand and after shots. The prong bit is used in cleaning mud and paraffin from the walls. Both bits are very fast.

A large number of Clark Sand Cleaners have already been sold in the Salt Creek Field of Wyoming and the Panhandle Field of Texas. Experience has shown that these cleaners save sand lines and cordage, eliminate the use of a bailer and if desirable, eliminates the introduction of water into the hole. They also save the time and expense of moving a string of tools from one location to another.

The Clark Sand Cleaner is fully covered by patents and is now being manufactured on a production basis. These sand cleaners are made in the following sizes: 3½-B for 5⅛-in. hole; 4¾-C for 6⅝-in. or 6¼-in. hole; 6¼-D for 8¼-in. hole. Other sizes can be made to meet special requirements.

SPENT TWO MONTHS IN SOUTH AMERICA

W. A. Trout, of the Emsco Derrick & Equipment Co., recently returned to Los Angeles, from a two months' visit to the principal oil fields of South America. The trip was made to gain first-hand knowledge of the actual conditions confronting operators in the Maracaibo Lake region, where a large number of Emsco steel derricks and rotary outfits are now in operation.

Mr. Trout believes the region visited to be admirably adapted to the American system of rotary drilling. The territory is not new and development has been going on for several years with old systems of cable tool drilling. With the introduction of American drillers and American rotary equipment about two years ago, real drilling activity was started, and the Maracaibo Lake region has taken on the appearance and activity somewhat similar to our own California fields. As a consequence a great demand has been created for the best and heaviest rotary machinery available.

TIMKEN BUILDING PLANS

A Canton, Ohio, dispatch says Timken Roller Bearing Co. plans expenditure of more than $1,500,000 in new buildings and equipment to provide for increased production of bearings for general industry and for first manufacture of roller bearings for railroad cars. Additions will be ready for operation about January 1.

AXELSON SALES CHANGES

Clinton J. Huyck, who has been associated with the Tulsa office of the Axelson Machine Co., has been transferred to the Los Angeles general office and his place in Tulsa will hereafter be occupied by Bruce Parkinson. Fred Spurlock, a new member of the Axelson organization, will make his headquarters at Houston, Tex. He will cover the Gulf Coast fields.

STEEL PRODUCTION RUNNING HEAVIER; OIL COUNTRY BUYING STILL ACTIVE

By B. E. V. Luty

PITTSBURGH, Pa., June 7.—Some authorities in the trade claim there was more buying of steel in May than in April. In other quarters this is not believed, but the existence of such uncertainty shows that there was no decided decrease. In other words, the business is not following the course of a year ago, when there was a continuous and quite substantial decrease in buying up to July.

On all hands the steel market position now is considered a good one, on account of its making such a favorable comparison. There is no doubt that on the whole, steel consumption is running at a higher rate this year than last, although last year made a new high record in production and shipments.

A comprehensive proof of the steel business being better in tonnage this year than last is furnished by this comparison, that while the 44,140,738 tons of steel ingots produced in 1925 made a new record for a calendar year, the production in the 12 months, June, 1925, through May, 1926, was about 45,400,000 tons, or 3 per cent more, and production this month is running heavier than in June of last year, so that the 12 months through June will make a still higher total.

Consumers Busy

All the steel consuming industries are running either moderately well or very well, though some of them have decreased somewhat in activity lately, and others seem quite likely to decrease in the next few months. The automobile trade has had its seasonal decline, but is running now about as well as would be expected for this time of year. The tractor business is very active, and some tractor manufacturers are behindhand in deliveries. Agricultural implement factories have slowed down only a trifle and seem likely to have a less slack summer than usual. Fabricated structural steel work is holding up very well, showing no signs whatever of tapering off. In fact, the lettings in the past three or four weeks have been distinctly above the average. Rail deliveries are running very heavy, practically at capacity, but will, as usual, run relatively light in the late months of the year. They may maintain substantially their present pace through August. The deliveries are chiefly against orders for the year, placed late last year, but there has been quite a run of additional buying this year, over 150,000 tons being bought in May. Freight car shops have been getting practically no new business for nearly three months and are beginning to reduce working forces slightly.

Steel mill operations are now at about 80 per cent, the average during May being between 80 and 85 per cent. March was the high month, with fully 92 per cent. July is usually the low month of the year in mill operations but the present outlook that the rate next month will be well above 70 per cent, against 67 per cent last July.

Prices of some of the steel products are under more or less pressure, but the market is holding quite well except in the case of sheets. Mills have announced an advance of $2 a ton on merchant bars, to 2.00c, Pittsburgh, for 100-ton lots and over and 2.10c for smaller lots. This would merely restore prices of earlier in the year, but buyers doubt whether the advance will hold. Sheets have yielded again all around except automobile sheets, and are now quotable as follows: Blue annealed, 2.35c to 2.40c; black, 3.10c to 3.25c; galvanized, 4.30c to 4.40c; automobile sheets, 4.30c.

Oil Country Market

While buying of oil country goods is running somewhat lighter than earlier in the year, it is still quite active, and the mills have some backlog business. Claims are made of some sizes being five to six weeks behindhand in deliveries, but it is noticed that if a buyer insists on earlier delivery the mill generally contrives to arrange it rather than let the buyer go elsewhere. Merchant pipe demand has increased a trifle farther and is now at the highest rate of the year. Pipe mills are running at about 80 per cent.

Foundry pig iron had been weak for several weeks when a large buyer appeared, the Standard Sanitary Manufacturing Co. being willing to contract for deliveries over the second half of the year, whereupon $18, valley, was done, against $19 as the nominal market previously. Bessemer and basic are off 50 cents, the new market being: Bessemer, $19; basic, $18; foundry, $18; f.o.b. valley furnaces. For a short time about a year ago, similar prices were ruling, otherwise these are the lowest prices in the valley market since 1916.

Connellsville coke continues dull, with spot at $2.85 to $3.00 for furnace and $4.00 to $4.50 for standard foundry.

PIN LOCK DESIGNED TO REPLACE COTTERS

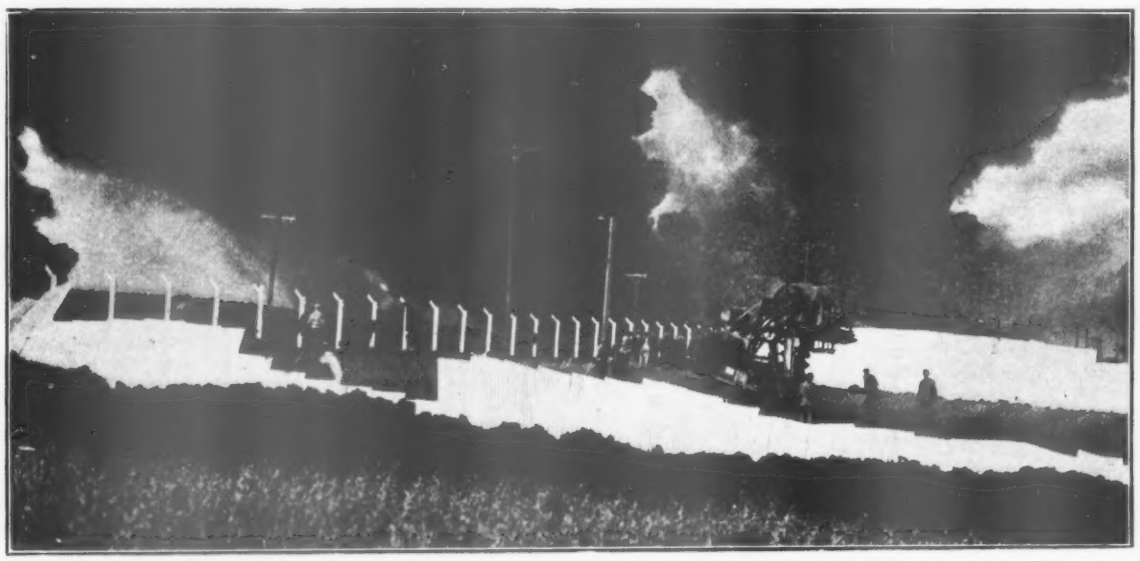
Two new oil well chains, Rex Deep Well Chabelco, 1240—D. W. 4 and 1030—D. W. 3 with ground pins, ground bushings, a new pin lock and high tensile strength have recently been introduced to the oil fields by the Chain Belt Co. of Milwaukee, Wis.

The Rex pin lock offered on these chains is entirely new and is designed to replace the cotters ordinarily used. It is said to give the new Rex chain every advantage of both riveted and cottered chain without the drawback of either.

POWER COMPANY EXPANSION

Of interest in power plant engineering circles is the announcement of the Power Specialty Co., 111 Broadway, New York, that it is now in a position to provide complete steam generating units with the exception of the boiler, and that it will contract either for a complete steam generating installation or will contract for all of the generating unit, with the exception of the boiler which may be supplied independently by the owner. In either case the company will make guarantees of performance and assume the entire responsibility for results secured.

DITCHERS PREVENTING SPREAD OF OIL FIRE AT BREA, CALIF.



Modern battlements consisting of a moat 18 inches wide by 2½ feet deep and a galvanized iron wall built by placing corrugated sheets, lapped one over the other, on end in the trench, and throwing part of the dirt back in to hold the sheets in place, were thrown up around the burning reservoirs of the Union Oil Co. near Brea, Calif., recently and, combined with carloads of Foamite, prevented the boiling oil from spreading flames and destruction in every direction. The barricades, ringing the three burning reservoirs, confined the fire to the section where lightning had started it and thus saved the surrounding country and probably many lives.

These effective barriers could not have been erected in time but for the work of two Barber-Greene Ditchers that worked amid the smoke and flame at the rate of 300 feet per hour each from the time they got to the job until their work was completed. The picture shows one of them at rest, but ready to dig again if the fire gets out of hand.

How Do You Figure Drilling Speed?

Operators and drilling contractors who must make hole to stay in business know that drilling speed includes "time out" for changing bits as well as the footage made while the bit is at the bottom of the well.

There is still another consideration in hole making that confronts every driller; ordinary bits working in hard formations lose gauge as they wear and leave the hole too tight for casing and often too tight for the return of a full-gauge bit of the same type. In many full-sized holes, there are knobs or projections that might hold casing back.

Drilling speed must include all time required for reaming necessary to put the hole in proper shape for casing.

The Reed Rock Bit is designed to make full-gauge hole irrespective of degree of wear on the cutters. As an extra precaution, four big reamers follow behind to clean up the hole and assist in keeping the bit straight.

The use of a Reed Rock Bit in cutting hard rock is definite assurance of a real increase in drilling speed.

Reed Rock Bits

Reed Roller Bit Company

HOUSTON LOS ANGELES

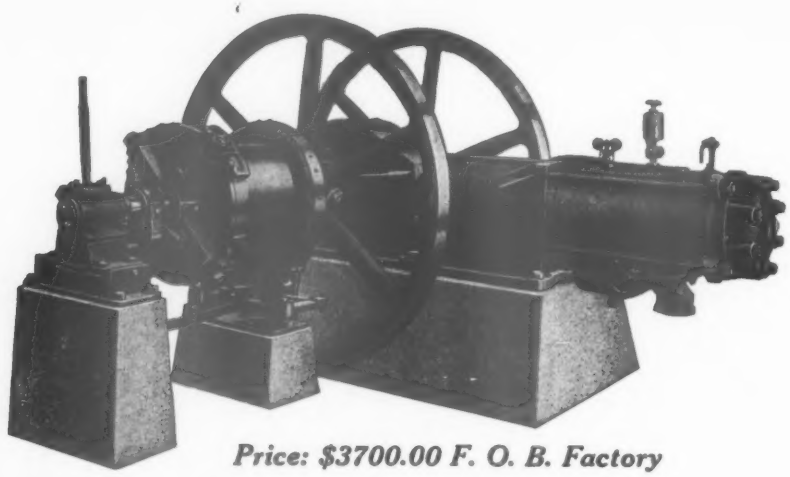
The refiner who uses the Dubbs Cracking Process can contemplate the rising prices of gas oil and light distillate without regret or remorse

Increasing demand for these fractions for household burners, Diesel engines and other relatively essential uses will fix the prices of these fractions above their profitable use for cracking

But the refiner with a cracking process limited to cracking only gas oil, will continue to pay advancing

prices for his charging stock and, with every purchase, must bid the price up on himself simply because of the limitations of his process

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois



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One of these has been the Internal Combustion Engine Power Service.

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25-30 H. P.
40 H. P.
50 H. P.
60 H. P.

All above sizes of Engines and Clutches are interchangeable on the same block and foundation without alteration.

—SERVICE—

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He is your man, at our expense; he'll benefit you!

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East Coast is a Stabilizing Factor

Proves Itself "Shock Absorber" of Industry, Bearing Impact of Floods From Mexico, Mid-Continent, California

By Charles E. Bowles
Petroleum Analyst, The Oil and Gas Journal

Of the 10 distinct refining areas in the United States the East Coast is the most "composite." Not a barrel of crude oil is produced within the borders of this area—and yet, in 1925, the refineries in this area ran to stills over 128,000,000 bbls of crude oil. Without the pipeline and the tank steamer there would be no East Coast refining area. The Appalachian refining area ran to stills last year 5,000,000 bbls. more crude than it produced—the Indiana-Illinois area ran 50,000,000 bbls. more than it produced—and, as just stated, the East Coast area ran 128,000,000 bbls., and produced none.

As these three refining areas include all of the refineries east of the Mississippi it very obviously follows that, last year, the refineries east of the Mississippi ran to stills over 183,000,000 bbls. more crude oil than the oil fields east of the Mississippi produced.

In other words the oil fields produced 37,894,000 bbls. of oil—and the refineries ran 220,768,000 bbls.—leaving 182,874,000 bbls. of crude to be brought in by pipelines and tank steamers, with a negligible amount by tank cars.

One can not get the right background and perspective of the oil industry east of the Mississippi River unless he starts out with the idea clearly in mind that this area is today refining about six times as much crude oil as it is producing—and that, for every barrel of its own crude that it refines, the pipeline and the tank steamer bring in 5 bbls.

Supply East's Problem

For the refiner on the East Coast the first big problem is a crude supply that can be depended upon 365 days in the year. Nevertheless, for 60 years, the refineries on the East Coast have not only supplied their own local markets, which are among the largest in the United States, but they have built up markets in every foreign nation on the globe.

And all of this has been done without ever having produced a single barrel of crude oil. Every barrel that has ever been refined has been "shipped in."

Obviously, then, because the refining industry in this area has had to look beyond its own boundaries for both its raw materials and a large part of its markets, its problems have been essentially different from any other refining area. The very fact that East Coast refineries run crude from the Mid-Continent, Gulf Coast, California, Mexico, Peru and Venezuela and ships to markets all over the world, with all of the fluctuations incident to world supply and world demand, is clearly reflected in the numerous "short swings" in the seven lines of the accompanying graph—one crude run line, four output lines and two storage lines. In many ways this graph is radically different from the graphs of the nine other areas—and the fact is clearly apparent that the East Coast has been a "shock absorber" for the ebb and flow of both crude oil and markets, both foreign and domestic.

Bore Impact of Flood

The impact of the flood from Mexico in 1920-21-22, and from the Mid-Continent and from California in 1923, hit the East Coast harder than any other refining area—and, because it had no crude supply of its own, its refineries were forced continually to "adjust" their operations so as to maintain a safe balance between a fluctuating supply and world-wide markets.

In comparing the line showing "crude run to stills" (of the accompanying graph) with the corresponding line in the graphs for the nine other areas it is clearly apparent that, because of the widely varying quantity and quality of crude supply, the refiners in the East Coast area were forced to keep one finger "on the pulse" of world supply and another finger on the pulse of world markets—and this to a greater extent than any other refining area in the country.

In the Appalachian area the "range" between the smallest and largest monthly runs of crude, during the 8-year period, was only 860,000 bbls.—in the Indiana-Illinois area the range was about 4,000,000 bbls.—and in the East Coast area about 7,000,000 bbls. These three "ranges" reflect clearly the relative growth of refining east of the Mississippi during the eight years.

In the East Coast area each year from 1918 to the end of 1924 showed an increase in the amount of crude run to stills. But in 1925 about 5 per cent less crude was run than in 1924 (135,000,000 bbls. in 1924 and 128,000,000 bbls. in 1925.)

The effect of this decrease is clearly shown in the following tabulation of the output of the four major products—all amounts in gallons:

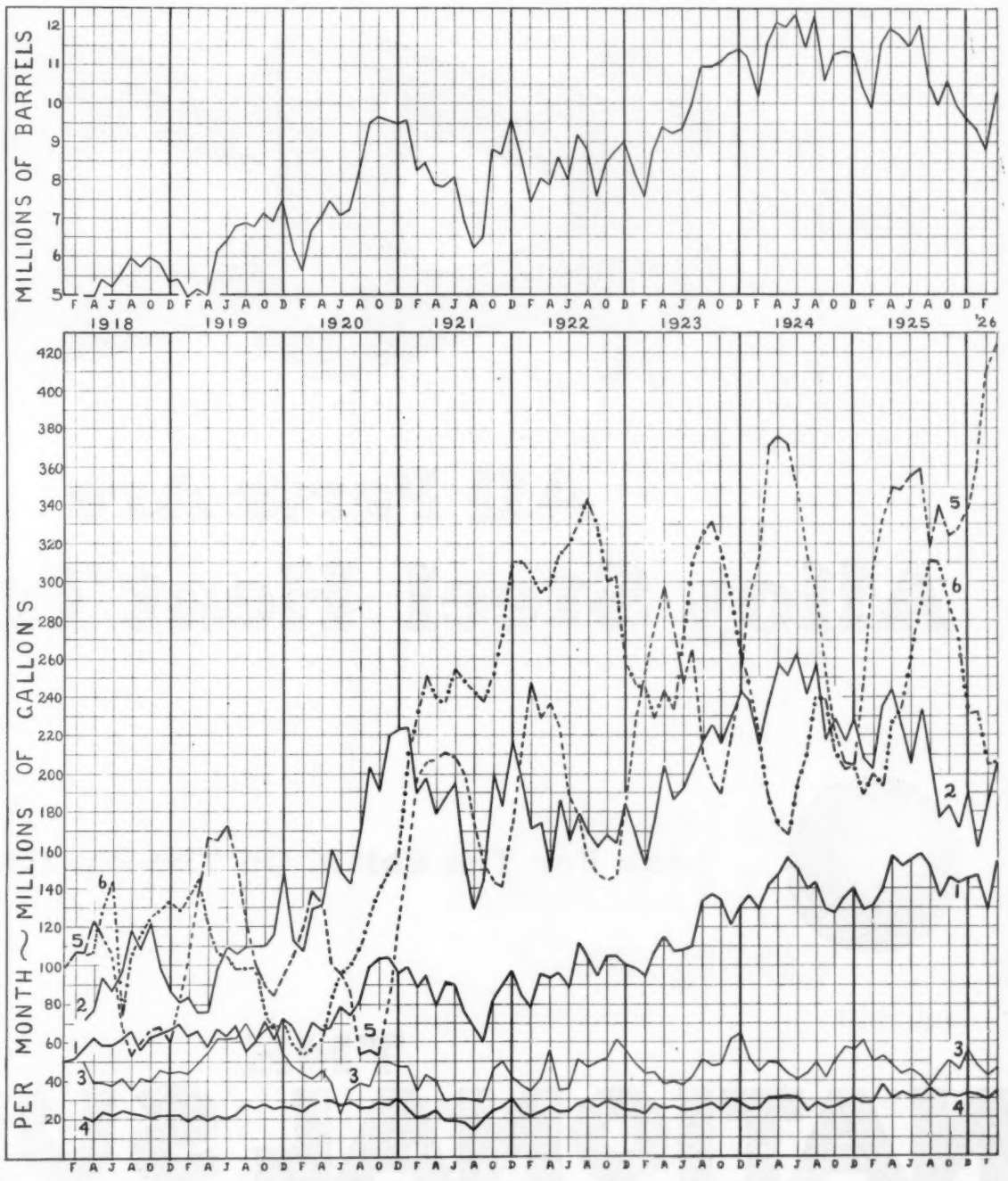
Item—	1924	1925
Gasoline	1,678,000,000	1,744,000,000
Fuel Oil	2,856,000,000	2,475,000,000
Kerosene	577,000,000	573,000,000
Lub. oil	339,000,000	386,000,000

Significant Shift

Thus, in this great refining area, highly "composite" in its source of supply and in its markets, the slow but sure "shift" from fuel oil to motor fuel is shown. The recovery of gasoline increased from 29.5 per cent to 32.3—fuel oil dropped from 50.3 to 45.9—kerosene increased from 10.1 to 10.6 and lubricating oil from 5.9 to 7.1 per cent.

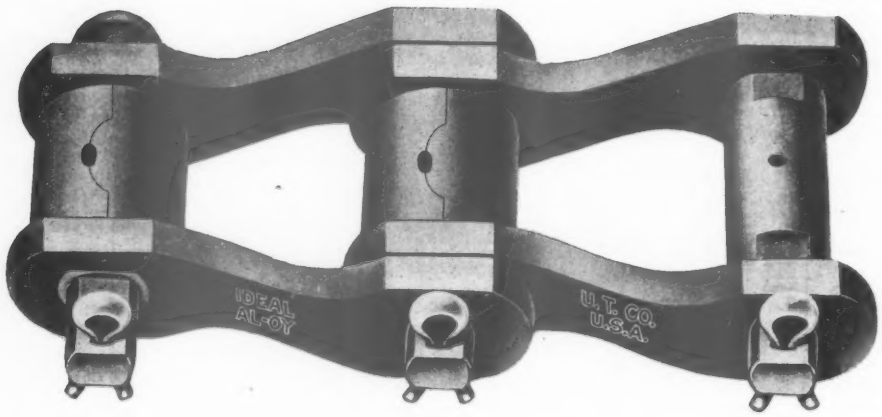
In connection with this general shift from fuel oil to gasoline, it is interesting to note that, in the accompanying graph, in the closing months of 1925 the gasoline line (1) and the fuel oil line (2) came closer together than at any time since the early months of 1919.

Thus we have graphic proof of Mr. Teagle's contention of the growing importance of fuel oil as a source of gasoline,

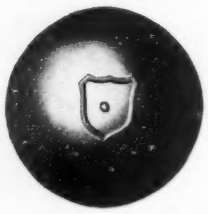


East Coast Refining Area. Upper section, crude oil run to stills. Lower section, line 1, gasoline made—line 2, fuel oil made—line 3, kerosene made—line 4, lubricating oil made—line 5, gasoline in storage at refineries—line 6, fuel oil in storage at refineries. Data from reports of United States Bureau of Mines.

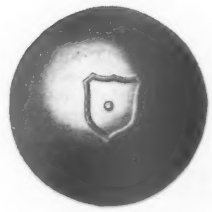
IDEAL
AL-OY
STEEL SPROCKET CHAIN



All Parts Are
Alloy Steel Heat Treated



Look For The Shield On The Pin Head



THE NATIONAL SUPPLY COMPANIES

thereby supplementing crude oil as the primary source.

Referring to the graph with the article on the Texas Gulf Coast (The Oil and Gas Journal, March 18, 1926, page 86) it will be noted that after traveling far apart for years the gasoline and fuel oil lines came very colse together in the early part of 1926. Since that article was published it is interesting to note that the "swing" from fuel oil to gasoline has gone still farther:

Item—	January	March
Gasoline	163,830,000	156,105,000
Fuel oil	169,522,000	158,192,000

While it is almost certain that 1926 will see "the average barrel" of crude oil refined in the Texas Gulf Coast produce more gasoline than fuel oil it is very probable that the closing months of 1926 or the early part of 1927 will see a like condition prevail in the East Coast area.

Some idea of the economic significance of this shift from fuel oil to gasoline can be got by laying the graphs of the Texas Gulf Coast and the East Coast side by side and noting that after years of a wide "spread" between fuel oil output and gasoline output in both areas these two lines have been slowly approaching each other and that, in the very near future, it is almost certain that the gasoline output line will swing up over the fuel oil line.

More Gasoline Than Fuel Oil

And this will mean that, for the first time, in these two areas, "the average barrel" of crude oil is yielding more gasoline than fuel oil.

On the old idea that gasoline is a "summer" product and fuel oil a "winter" product no storage curves could be more ideal than those for gasoline and fuel oil

almost as much kerosene was made as gasoline (779,000,000 gallons of gasoline and 703,000,000 gallons of kerosene.) From this high recovery of kerosene—22.3 per cent—the recovery dropped to 10.6 in 1925. Lubricating oil recovery dropped from 9.5 per cent in 1918 to 7.1 per cent in 1925.

In 1925 the East Coast area produced 1,744,000,000 gallons of refinery gasoline whose origin was as follows:

Source—	Gallons	Per Cent
Straight run	1,064,000,000	61
Cracked	544,000,000	31
Natural gasoline	136,000,000	8
	1,744,000,000	100

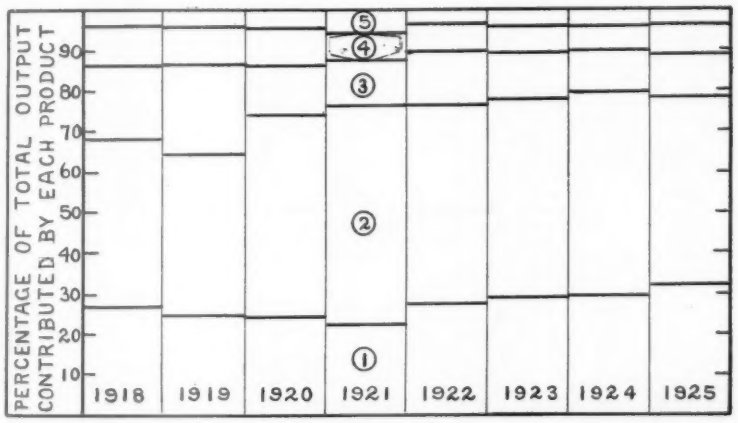
To make possible a comparison between refinery operations in the two areas, the following tabulation is given for the Texas (largely Gulf Coast) area:

Source—	Gallons	Per Cent
Straight run	1,323,000,000	59
Cracked	741,000,000	33
Natural gasoline	167,000,000	8
	2.231,000,000	100

In the East Coast area 128,000,000 bbls. of crude were run to stills—and in Texas (entire state) 144,000,000 bbls. were run. It would thus appear that in Texas cracking is a somewhat more important source of gasoline than in the East Coast area.

Show Absorber of Industry

Because of the fact that it does not produce a barrel of crude oil the East Coast area occupies a peculiar strategic position as a constant buyer of crude oil and an occasional buyer of refined products. In 1925 it was in the market for an average of about 300,000 bbls. a day of domestic crude oil. This means that this single refining area consumed, every day, three times as much crude oil as was



East Coast Refining Area. Space 1, gasoline—space 2, fuel oil—space 3, kerosene—space 4, lubricating oil—space 5, all other products. Percentage recoveries based on crude oil run to stills. Data from United States Bureau of Mines.

in the East Coast area in 1924—gasoline stocks up in the spring and down in the fall—fuel oil stocks down in spring and up in the fall.

In 1925 the spring upswing of gasoline was normal—but the downswing was quickly halted—and instead of dropping normally, as it did in each of the preceding years, it started climbing, and at the end of March, 1926, stood at 424,000,000 gallons, the highest it has ever reached. And this stock was over two and one-half times as large as the stocks in the Oklahoma-Kansas area which makes more gasoline than the East Coast area.

Of course, a part of the answer to this is the fact that when the gasoline situation became critical in the Mid-Continent last year the big East Coast refiners, with international markets stepped in and bought millions of gallons of Mid-Continent gasoline. A very interesting sidelight on the gasoline storage situation is revealed by a comparison of the gasoline storage line in the Oklahoma-Kansas graph (The Oil and Gas Journal, March 4, 1926, page 82) with the gasoline storage line of the East Coast area herewith.

Checks Closely

In value of both crude runs and output the Texas Gulf Coast checks closely today with the East Coast—and it is interesting to compare the gasoline storage and fuel oil storage lines of the two areas.

In the manufacture of kerosene a rather amazing condition prevailed in 1919 when

produced east of the Mississippi River. With markets stretched along the Atlantic Seaboard and around the world, the East Coast area—whether it wills to do so or not—has been, is and will continue to be the "shock absorber" for the oil industry both domestic and foreign.

But that it has done more tnan absorb a fluctuating and frequently a distressing surplus of both crude and refined, and has been a "stabilizer" of the market is a fact well known to the industry—and little known to the public.

Industrially, economically and constructively the East Coast has been, outstandingly, "a stabilizer of the surplus" from Mexico, from the Mid-Continent and from California, each of which, without this vast market, would have brought chaotic conditions to the industry in general—and to themselves in particular.

ALBERTA OIL COMPANIES

CHATHAM, Ont., June 5.—A total of over $10,000,000 capitalization was represented in the score of oil companies incorporation of which was announced in last week's Canada Gazette. All except one are in the Calgary district. One company capitalized at $2,000,000 and one at $1,000,000, the average being $500,000. The rush was occasioned by the announcement that in future the Government will incorporate only on the no par value stock plan.

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better than we do, but VALDURA has given such excellent satisfaction at oil refineries that we want you to become acquainted with it.

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is being adopted as a standard by a great many concerns, because it eliminates all uncertainty and thus effects a considerable saving. VALDURA represents the experience of over thirty years in the Asphalt Paint business. We are honest and sincere in our desire to serve you and our purpose is to meet your demands, fulfill fairly and squarely your expectations and make you a fast friend of VALDURA.

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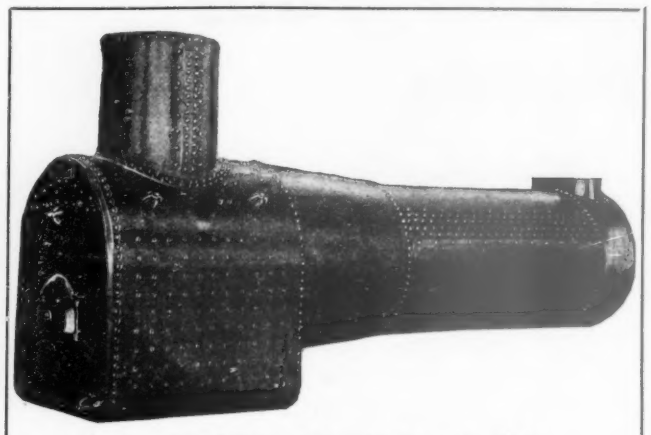

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Universally Known and Always Preferred

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MIDLAND IRON WORKS
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All Leading Supply Houses Throughout the Eastern Fields Handle

Donovan Quality Products
Always Dependable

SUBSTANTIAL INCREASE IN CRUDE RUNS

(Continued from Page 31)

Independent Oil & Gas Co. (Allied), Okmulgee	1,800	1,200	1,200
Interocean Refining Co. (Lorraine), Bristow	4,000	1,800	1,200
Lawton Refining Co., Lawton	1,000	Shut down	Shut down
Johnson Oil Refining Co., Cleveland	5,000	4,500	4,600
Marland Refining Co., Ponca City	25,000	20,000	16,000
Mecca Refining Co., Allen	1,500	100	100
Mid-Continent Petroleum Co. (Cosden), West Tulsa	35,000	26,000	26,000
*Miller Brothers 101 Ranch, Marland	100	50	50
†Oil State Refining Co., Enid	2,000	1,300	Shut down
Oklahoma Asphalt Co. (Nyanza), Wilson	3,000	750	....
Okla.-Tex. Refining Co. (Sagamore), Grandfield	2,000	Shut down	Shut down
Peppers Gasoline Co., Covington	1,000	700	750
Pierce Oil Corp., Sand Springs	10,000	7,000	7,000
Pontotoc Pipe Line & Refining Co., Allen	800	300	250
Producers & Refiners Corp., West Tulsa	7,000	4,000	2,800
Producers & Refiners Corp., Blackwell	4,000	Shut down	Shut down
Pure Oil Co., Ardmore	6,500	2,000	2,160
Pure Oil Co., Cushing	5,000	Shut down	Shut down
Pure Oil Co., Muskogee (O. P. & R. Co.)	2,500	2,000	2,000
Red Seal Refining Co., Oklahoma City	2,500	Shut down	Shut down
Riley Petroleum Co., Bristow	800	500	500
Rock Island Refining & Pipe Line Co., Duncan	2,500	2,100	2,250
Roland Oil Co., Bristow	1,500	1,400	1,050
Sayre Oil & Refining Co., Sayre	500	100	100
Shaffer Oil & Refining Co., Cushing	10,000	10,000	10,000
Sun Oil Co., Yale	3,000	2,600	2,500
Sinclair Refining Co., Cushing	6,000	Shut down	Shut down
Sinclair Refining Co., Muskogee	1,000	900	1,000
The Texas Company, West Tulsa	11,000	10,800	10,800
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,800	1,850
Tidal Refining Co., Drumright	10,000	10,000	8,000
Transcontinental Oil Co., Boynton	2,500	2,000	2,000
Transcontinental Oil Co., Bristow	6,000	4,000	3,800
Tonkawa Petroleum Co., Tonkawa	2,500	800	1,000
Western Oil Corp., Beckett	1,500	1,000	1,000
Yale Oil Corp., Yale	1,200	500	600
Total	272,600	182,875	172,445

*Average daily runs lower.
†Operated by Bolene Refining Co.

REFINING OPERATIONS IN KANSAS

(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs June 1	Runs May 1
Arkansas City Refining Co., Arkansas City	8,000	1,500	1,500
Barnsdall Refineries, Inc. (Waite Phillips), Wichita	5,000	3,500	3,000
Commonwealth Oil & Refining Co., Moran	1,800	Shut down	Shut down
Derby Oil & Refining Co., Wichita	5,000	3,800	2,500
El Dorado Refining Co., El Dorado	3,500	2,500	2,500
Golden Rule Refining Co., Wichita	1,000	900	500
Grant Oil Co., Augusta	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	9,000	6,500	6,500
Manhattan Oil Co. (K. C. Ref. Co.), Kansas City	5,000	5,000	4,500
Miller Petroleum Co., Humboldt	2,000	Shut down	Shut down
National Refining Co., Coffeyville	6,000	6,000	6,400
Peerless Oil Refining Co., Chanute	3,000	2,200	2,000
Roxana Petroleum Corp., Arkansas City	19,500	18,000	11,000
Russell County Pipe Line Co. (West Kans. Refg. Co.), Russell	2,500	800	800
Sinclair Refining Co., Coffeyville	6,500	6,500	6,500
Sinclair Refining Co., Argentine	8,000	5,800	4,000
Skelly Oil Co., El Dorado	14,000	12,000	9,200
Standard Oil Co. of Kansas, Neodesha	12,000	9,000	9,000
United Oil & Refining Co., Hutchinson	2,500	Shut down	Shut down
Vickers Petroleum Co., Potwin	3,500	2,400	2,400
White Eagle Oil & Refining Co., Augusta	6,500	6,000	5,000
West Missouri Group—			
Wilhoit Refining Co., Joplin	2,000	850	1,000
Total	130,700	93,250	78,300

REFINING OPERATIONS IN NORTH CENTRAL TEXAS

(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs June 1	Runs May 1
Amarillo Refining Co., Amarillo	5,000	3,500	3,500
American Refining Co., Wichita Falls	7,000	4,600	4,700
Buffalo Refining Co., Sherman	500	Shut down	Shut down
Col-Tex Refining Co., Colorado	5,000	4,500	4,000
Crystal Petroleum Co., Burkburnett	1,000	250	250
Dale Oil & Refining Co., Electra	3,000	1,800	Shut down
De Leon Refining & Pipe Line Co., De Leon	1,500	Shut down	Shut down
Falls Refining Co., Wichita Falls	1,500	1,200	1,400
Gulf Refining Co., Fort Worth	15,000	6,400	6,500
Hagaman Refining Co., Tiffin	2,000	275	275
Humble Oil & Refining Co., Burkburnett	4,000	1,900	1,900
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,100	1,600
Kent-Middleton Refining Co., Angus	3,000	2,600	1,300
Magnolia Petroleum Co., Fort Worth	12,000	6,700	6,700
Magnolia Petroleum Co., Corsicana	10,000	2,700	3,000
Megargel Refining Co., Megargel	2,000	600	600
Miller Petroleum Co., Wichita Falls	3,000	1,800	1,950
National Refining Co., Texas, Greenville	2,000	Shut down	Shut down
Noble Oil & Gas Co., Burkburnett	5,000	2,600	2,600
Olney Oil & Refining Co., Olney	1,200	1,000	1,000
Oriental Refining Co., Dallas	6,000	350	350
Oriental Refining Co. (Trinity), Dallas	5,000	2,800	2,800
Orient Petroleum Co., Wichita Falls	2,000	900	1,000
Panhandle Refining Co., Wichita Falls	4,000	2,500	2,200
Paris Refining Co., Paris	250	250	250
Peerless Refining Co., Wortham	400	Shut down	Shut down
The Petroleum Corp., Electra	2,000	Shut down	Shut down
Primrose Refining Co., Wichita Falls	1,500	1,000	1,130
Producers Refining Co., Gainesville	5,000	4,000	4,000
Simms Oil Co. (Clayton), Dallas	4,500	4,400	4,000
Star Refining & Producing Co., Fort Worth	1,500	Shut down	Shut down
Sweetwater Refining Co., Sweetwater	500	Shut down	Shut down
Tidal Western Refining Co., Burkburnett	3,000	2,700	2,500
The Texas Company, Dallas	15,000	10,000	10,000
Texas Pacific Coal & Oil Co., Fort Worth	6,000	2,300	....
Texhoma Oil & Refining Co., Wichita Falls	7,000	4,400	4,600
Transcontinental Oil Co., Fort Worth	5,000	2,500	1,700
Waggoner Refining Co., Electra	3,400	2,700	2,500
Western Oil Corp. (Sunshine), Wichita Falls	2,500	200	Shut down
White Eagle Oil & Refining Co., Fort Worth	4,000	3,000	2,500
Wilson Brothers Refining Co., Wichita Falls	2,500	Shut down	500
Total	167,250	87,525	82,155

REFINING OPERATIONS IN NORTH LOUISIANA

(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs June 1	Runs May 1
Crystal Oil Ref. Corp. (Caddo Central), Shreveport	3,500	3,250	3,500
Crystal Oil Ref. Corp. (Caddo Central), Shreveport	5,000	5,000	5,000
Great Southern Refining Co., Ardis	2,000	Shut down	Shut down
Louisiana Oil Refining Corp., Shreveport and Bossier	19,000	13,300	18,800
Shreveport Producing & Refining Co., Shreveport	5,500	4,700	4,500
*The Texas Company, Ardis	7,000	6,500	6,000
Total	41,500	32,750	37,800

*Topping.

REFINING OPERATIONS IN ARKANSAS

(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs June 1	Runs May 1
Cross Refining Co., Smackover	3,500	2,000	3,500
Home Refining Co., Camden	500	75	75
Home Oil & Refining Co., Hot Springs	500	50	50
Houston Oil Co., Camden	5,000	1,900	3,000
Kettle Creek Refining Co., Pearson	4,000	3,600	3,000
Lion Oil & Refining Co., El Dorado	10,000	7,800	7,000
McMillan, Fehlman & Oliver, El Dorado	1,500	1,100	830
Ouachita Valley Refining Co., El Dorado	1,500	1,400	700
Root Refineries, El Dorado	2,500	2,200	2,500
Total	31,000	20,125	20,655

HOUSTON PIPE LINE COMPANY
1109 SCANLAN BUILDING

HOUSTON, TEXAS

August
fourteenth,
1925.

The Dayton Pipe Coupling Company,

Dayton, Ohio.

Gentlemen:-

We wish to take this opportunity of complimenting you on the prompt and efficient manner in which you handled the large order for Dayton Pipe Couplings, with which you recently supplied us.

Might state further, that we have found the couplings to be of first-class workmanship in every respect, and of the entire shipment, we did not find it necessary to register complaint of any nature.

Yours very truly,

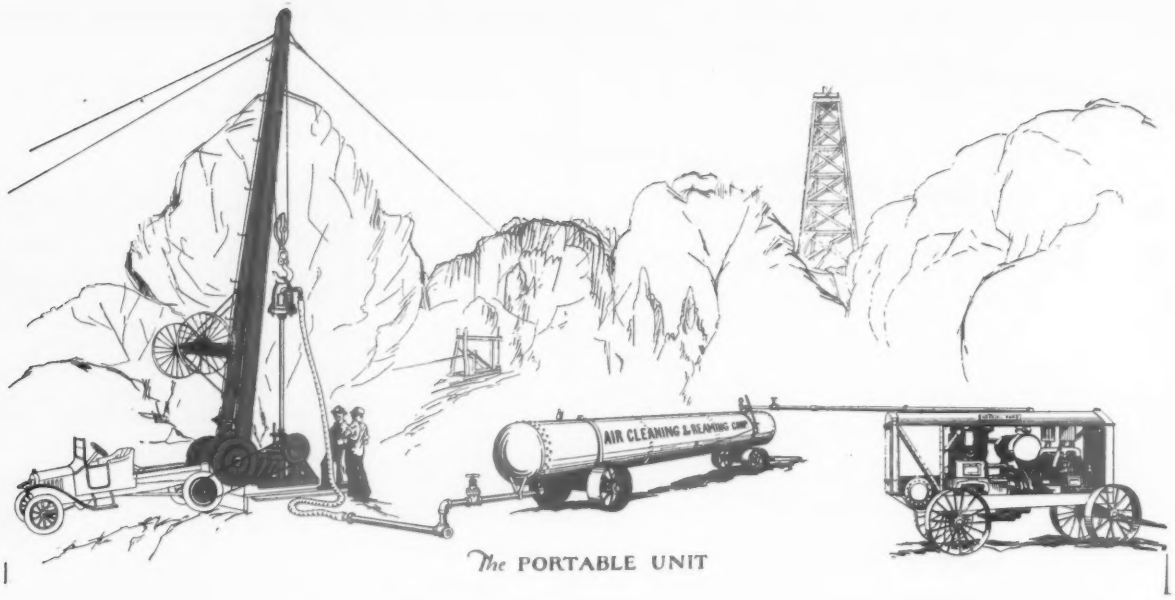
HOUSTON PIPE LINE COMPANY,

Gen'l. Manager.

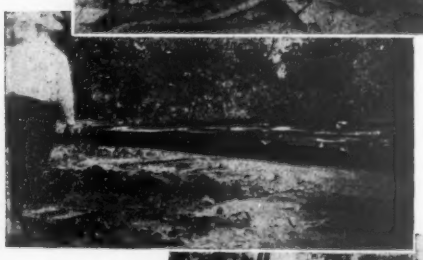
CPW:S

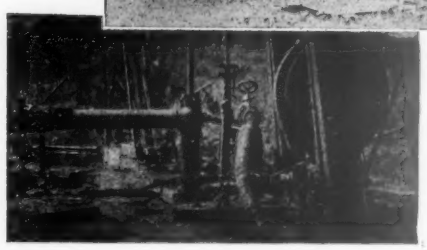
THE DAYTON PIPE COUPLING CO.

DAYTON, OHIO



The PORTABLE UNIT





Clean and Ream
by the AIR Process

THIS method combines cleaning and reaming oil wells in one operation—shots of compressed air are turned into the well through tubing with reamer attached forcing all cavings and debris from same through the annular space between tubing and casing. "Shots" of air are repeated approximately every hour as reaming continues. The Jones Air Reamer revolving at high speed cuts a fresh wall and enlarges the seepage area.

Saves time—CUTS CLEANING COSTS IN TWO. Increases production by enlarging seepage area.

Removes paraffin; corrosion and burnt sand.

Eliminates sand troubles, rejuvenates the oil sand.

This company controls all patents and producers are licensed to use this process on a reasonable royalty basis.

Wells are being cleaned for Producers at very reasonable cost in order to demonstrate process. If you are contemplating installing an air plant to increase production send for complete information using coupon attached.

This Coupon Will Bring Full Information

SEND IT NOW

NAME .....

ADDRESS .....

CITY ..... STATE .....

AIR CLEANING & REAMING CORP.

SUCCESSOR TO

TIDAL DUNN CO.

TULSA, OKLAHOMA

CALIFORNIA FIELDS

(Continued from Page 56)

ening it and got to 1,920 feet when the well blew in flowing at the rate of 2,200 bbls. daily, later building up to nearly 3,000 bbls. It is at the present time doing a trifle better than 100 bbls. an hour and the steady flow indicates that it will probably continue at this rate for some time. The Beverly Oil Co.'s 42-acre lease adjoining now looks like a valuable piece of property and the company has already started preparations to drill an offset as close as possible to the Standard's new well. The Standard will also probably undertake some new work, as there are very few points in the state where 2,000-bbl. wells can be finished at 1,920 feet.

Very little interest in the deep zone possibilities at Maricopa has been manifested during the past several months, due to the failure of a number of wells to secure commercial production. The Obispo Oil Co. will, however, be in a position within the next few weeks to give this deep zone another test, as its No. 11 in Section 32-12-23 has just passed the 3,450-foot level. This well is located near the deep discovery and may succeed in getting some production from the same brown shale. The Standard's field department had an unusually busy week due to the completion of several new wells. The first finished was No. 43 in Section 29-31-24, which was a 130-bbl. pumper from 4,612 feet. No. 13 on the same property was put on a test and finished as a 125-bbl. pumper from 3,780 feet. No. 41, however, in the same section was cutting approximately 50 per cent water and will require further work. Two new wells, Nos. 53 and 54, were added to the company's list of producers in Section 33-31-24. The former is pumping 135 bbls. of 21.3 gravity oil from 4,190 feet, while the latter is making 138 bbls. from 4,205 feet. The Honolulu Consolidated finished a shallow producer, No. 25, in Section 4-32-24, but it was only good for 50 bbls. daily from 2,763 feet. The Union's No. 14 at Elk Hills in Section 26-30-24 was finished during the early part of the week at 3,563 feet and it is listed as a 260-bbl. pumper.

Southern California Wildcats

The Associated resumed work on its survey holes at Seal Beach a week or ten days ago and will probably spud in its fourth diamond core well within a short time, as No. 3 now drilling has but a short distance to go. The Union is rotating ahead in No. 1 Bryant in the northern part of this area at 2,760 feet and it is believed that the Marland will spud in its second test on the Bixby property some time within the next two weeks as rotary equipment is now being moved in. The Marland's Hyde Park wildcat has all the earmarks of a duster at 5,355 feet and an early abandonment would not be surprising. Work has just been started on the Union's latest wildcat, No. 1 Howland, west of the Inglewood Field, and it was reported yesterday at 460 feet.

The possibility of the Manhattan-Hermosa Beach area becoming an oil field received a severe setback early this week when the production test on George W. Johnson's No. 1 Martin in that area did not show even the slightest indication of oil, although there was a little gas present. Core samples indicated that Johnson had a fairly good looking but shallow sand at 3,927 feet and the failure of the well to show even a little oil was a distinct disappointment. The water problem in this area has always proved a troublesome one and, while it is Johnson's present intention to continue work, it would not be at all surprising if he abandoned further work and pulled out. H. A. Bardeen has been working with the old Manhattan-Pacific well for several months and recent tests indicate that it is just as wet as the day he took it over, although the hole has been bailed down several times only to fill up again later. The Julian Petroleum's wildcat in this vicinity will undoubtedly go a long way toward proving or disproving the existence of commercial production and, unless this well picks up something better than has been found heretofore, it is not believed that any further work will be done, at least for the present.

It does not look as though the Milham Exploration Co. has any chance of opening up a new field around Playa del Rey, as the company's second wildcat at that point is already down 5,300 feet with only a few minor gas showings to its credit. The Standard's No. 1 University in the San Fernando Valley is going ahead very slowly and a few feet of hole a day is a good run, due to the unusually hard formation present. The wildcat of the Van Nuys Community Oil Co., not far from the town of Van Nuys, is drilling ahead in a hard blue shale at 3,500 feet, with no favorable indications of any kind logged to date.

Northern California Wildcats

The Milham Exploration Co. is abandoning No. 1 Hyde at Buttonwillow at 1,859 feet and will use the information secured in determining the location for a deep test. At least one more, and possibly two, survey holes will be drilled in order to obtain the data necessary in determining the trend of the structure before undertaking further work. No. 1 Lazard of the Marland in Section 27-26-20 is rotating ahead in a hard sand at 4,745 feet, with the outlook none too encouraging. The Main Oil Co. is still diligently at work in the Wasco area and, although officials of the company still have hopes of opening up a new field at this point, it is the consensus of opinion that the company's work will be in vain.

No new drilling has yet been undertaken in the Poso Creek area, which the Shell proved up a few weeks ago by bringing in its No. 1 Vedder, although a considerable amount of work is being projected 4 or 5 miles west. The Fresno Madera Oil Co. made a test of its wildcat near Clovis in Fresno County, but the output from 3,750 feet was sulphur water. The Associated's wildcat in the Huron district is reported at 1,840 feet, the formation being a yellow sand. The Bolsa Chica Oil Co.'s wildcat in the Kettleman Hills district in Kings County is down 1,965 feet and, although there is 900 feet of oil in the hole, some additional footage will be made before it will be put on another test. The Marland's wildcat at another point in the Kettleman Hills several miles away is going ahead in a hard gray sand at 5,557 feet. The Standard has gone into Ventura County in earnest and is working at two points, No. 1 Valentine at Montalvo having just passed the 1,000-foot level, while the test at Camarillo is just about ready for work. The wildcat at Camarillo is located about 2 miles east and a little north of the city of Camarillo, in which area the company has about 2,000 acres under lease. The Milham Exploration Co.'s No. 1 Sexton, east of the Ventura Avenue Field, is down 4,732 feet with a protective string of 8⅝-inch standing cemented on bottom. No. 1 Hobson of the Chanslor-Canfield Midway Oil Co., west of the Ventura Avenue Field, is drilling ahead in a sandy shale at 4,300 feet, but, with the exception of a few upper gas showings, nothing has been found to date that looks at all promising. The Standard is starting work on what will probably be the most important wildcat development done in Santa Barbara County in some time. The company has acquired a substantial acreage from the Palmer-Union Oil Co., about 7 miles east of Orcutt, and the initial spud will probably be made within the next 60 days. This is a likely looking territory and might bear watching along around the end of the year.

DERRICK'S HANDBOOK ON SALE

The Derrick Publishing Co., Oil City, Pa., has published its annual review of the oil industry for 1925, and it is on sale by that company for 35 cents per copy, postage prepaid. The booklet is compiled from the annual review of The Oil and Gas Journal and contains a record of crude oil prices and statistics relating to field work, production, etc. It brings the series of Derrick handbooks and annual reviews up to the present.

Six 150-ton Brine Coolers with wooden lagging. Exchangers are shown in the background.

A 900-ton Carbondale Absorption Machine installation at the Sinclair Refining Co., East Chicago, Ind.

Sinclair standards and Carmaco

To maintain the Sinclair standard of lubrication requires a refining process that is dependable in every detail.

The distillate "thruput" is chilled uniformly, with minimum friction losses, by the counter current principle. The required temperatures are maintained by the use of reliable refrigeration.

Carbondale Refrigerating Machinery has, for years, been satisfying these demands, not only in the production of Sinclair Oils, but also in most of the other leading refineries. Some installations are still giving dependable service after more than 30 years of usefulness.

CARBONDALE MACHINE COMPANY
Carbondale, Pa.
Branches in Principal Cities

Carbondale Products

CARMACO COMPRESSION SYSTEM USING FEATHER VALVE (Reg. U. S. Pat. Off.) COMPRESSOR

CARMACO EXHAUST STEAM ABSORPTION SYSTEM

CARMACO RAW WATER ICE-MAKING SYSTEM

AUTOMATIC SELF-CONTAINED REFRIGERATORING UNITS

REFRIGERATING EQUIPMENT FOR OIL REFINERIES

SPIRA-FLO CONDENSERS

—o—

Ammonia Compressors
Condensers
Brine Coolers
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Forged Steel Fittings and Valves
Accessories for refrigeration systems of every type.

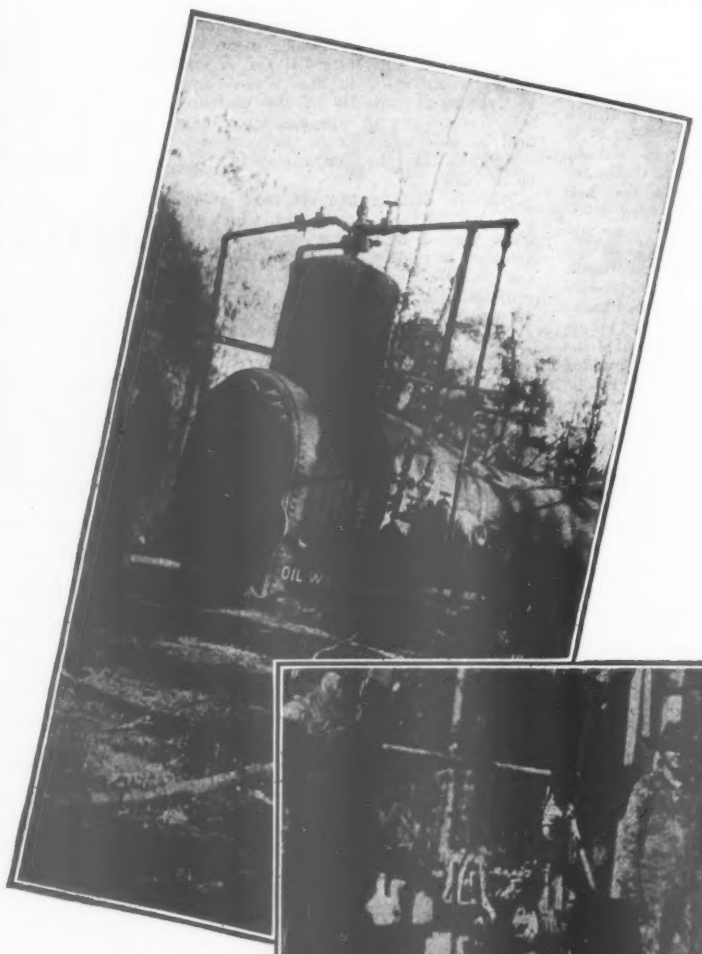
Carbondale Refrigeration CARMACO *for Refiners*

Of Course "OILWELL" Equipment

But Almost Every Oil Field Record Has Been Made or Broken by "OILWELL" Equipment

THIS 10½" x 12" "OILWELL" Steam Engine is the property of McQuiegg Brothers and was manufactured and sold early in 1910. It has been in service more than 16 years. It was used for drilling in the California fields about 10 years; it was then used for 5 years as a pumping engine, after which it was moved to Artesia, New Mexico, where it is now drilling its second well.

The only money spent for repairs during the entire 16 years was for re-babbitting after the engine had been through a severe fire.



HERE are two views of an "OILWELL" Outfit which was purchased in Haynesville, La., in March, 1922. It has just completed its twenty-eighth (28th) well, and the C. E. Ferguson Drilling Company inform us that the only expense they have had was one pinion and pinion shaft for the rotary. The "OILWELL" 66 H. P. Boiler has not cost one cent for repairs, and the original tubes are still in the boiler.

"OILWELL" ESTD. 1862 TRADE MARK REGISTERED

OIL WELL S

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD

XUM

ment

il Field
Made
VELL"

May Not Always Break Records--

An "OILWELL" Drilling Engine in use for 16 years; no repairs except re-babbitting after a fire.

An "OILWELL" Boiler in use for 4 years; no repairs, and the original tubes are still in the boiler.

An "OILWELL" Imperial Rotary has just completed its 28th well, the only expense being one pinion and pinion shaft.

HERE are a few proofs of the quality, durability, and reliability of "OILWELL" Equipment---or in one word, *service*. Of course all "OILWELL" Equipment may not make or break records, but every piece of equipment is intentionally designed and manufactured to give the best possible value. When you buy from "OILWELL" you are sure of getting *service* unparalleled by any other equipment.

100 Branches located in the principal oil fields

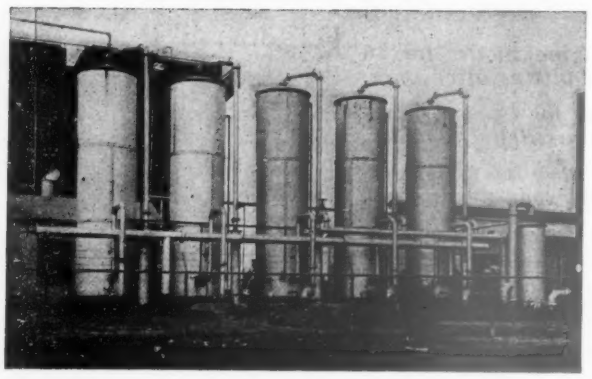
SUPPLY CO.

"OILWELL" ESTD 1862 C O TRADE MARK REGISTERED

FIELD EQUIPMENT

BRANCH STORES IN ALL OIL FIELDS

XUM



View of a typical Campbell Tower Installation

A proven fact

Every Campbell Absorber has paid for itself very quickly out of the increased production.

Almost every company that has installed one Campbell Absorber has ordered additional ones. One company began with three and is now using twenty-four. Since our first Absorbers were placed on the market nine months ago, we have made the following phenomenal record:

Over 70% of all natural gasoline produced in the Long Beach Field is now handled by Campbell Absorbers and over 30% of all natural gasoline produced in Southern California is handled by our equipment. Thus you can see the great demand for Campbell Absorbers.

Ask for catalog of facts.

J. A. Campbell

Consulting—Designing—Constructing
Natural Gas Engineer

P. O. Box 669 LONG BEACH, CALIF.

CAMPBELL
OIL FROTH
absorber

PETROLEUM STATISTICS FOR APRIL, 1926

By G. R. Hopkins
Petroleum Economist

The production of crude petroleum in the United States during April, 1926, as compiled from pipe line reports to the Bureau of Mines, Department of Commerce, amounted to 59,868,000 bbls., a daily average of 1,995,600 bbls. This is an increase in daily average production over March, 1926, of 2 per cent. The prospect of a price increase on the basis of continued withdrawals from stock was the stimulating influence which caused production to practically attain the 2,000,000 bbls. per day mark. This increase in activity is illustrated by the increase in the number of wells completed in April, 1,417, as compared to March, 1,304.

Of the various sections of the country the Oklahoma-Kansas area stands out as being mainly responsible for the increased total output. Production in Oklahoma showed an increase of 18,000 bbls. per day. Kansas revived considerably by virtue of an 8,000-bbl. gain in daily average production. Arkansas checked its falling output for the first month since May, 1925—the peak month for the Smackover Field. Production in California again showed a slight decline as the 600,000 bbls. per day mark was approached.

For the eleventh consecutive month, total stocks of crude petroleum east of California declined. This decrease, which amounted to 1,600,000 bbls., was made up of a decline in pipe line stocks of 4,100,000 bbls. and an increase in refinery stocks of 2,500,000 bbls. In California the crude stock situation underwent a radical change as a result of the disastrous series of fires. Stocks of refinable crude were depleted by over 5,000,000 bbls., and stocks of heavy crude and fuel oil, by 2,000,000 bbls. The total loss of all oils from these fires was reported as 8,215,000 bbls.

Refined Products

Runs to stills of crude petroleum during the month of April, 1926, totaled 61,289,000 bbls., of which 3,590,000 bbls. was foreign crude petroleum. This was a gain in daily average crude runs over the preceding month of 1 per cent.

Gasoline production broke all records as 987,633,000 gallons, or 23,515,000 bbls., was produced. This represents a daily average production of 32,921,000 gallons, or 784,000 bbls., which, compared to the preceding month, is a gain of 5 per cent, and to April, 1925, a gain of 13 per cent. This production represents a gasoline recovery from the crude oil run to stills of 38.4 per cent, the highest ever recorded. Exports of gasoline also set a record figure — the total for the month, 185,000,000 gallons (4,400,000 bbls.) exceeding by far the previous high figure—that for January, 1926, when 144,000,000 gallons was shipped out. Domestic demand for the month amounted to 831,410,000 gallons or 19,795,000 bbls., a gain in daily average over March, 1926, of 10 per cent. Stocks of gasoline were reduced 10,000,000 gallons during the month to a total of 1,926,725,000 gallons, or 45,874,000 bbls., on hand April 30, 1926. By the usual method of computation, these stocks represent 64 days' supply, which compares with 73 days' supply on hand a month ago and 61 days' supply on hand a year ago.

The less important refined products experienced very little statistical change during April. Stocks of both lubricants and gas and fuel oils (east of California) were again drawn on. On the other hand, stocks of wax are still on the increase.

The refinery data of this report were compiled from schedules of 326 refineries, of a daily crude oil capacity of 2,590,000 bbls., which operated during April at 79 per cent of capacity.

PRODUCTION OF CRUDE PETROLEUM, BY FIELDS AND STATES, WITH CLASSIFICATION BY GRAVITY

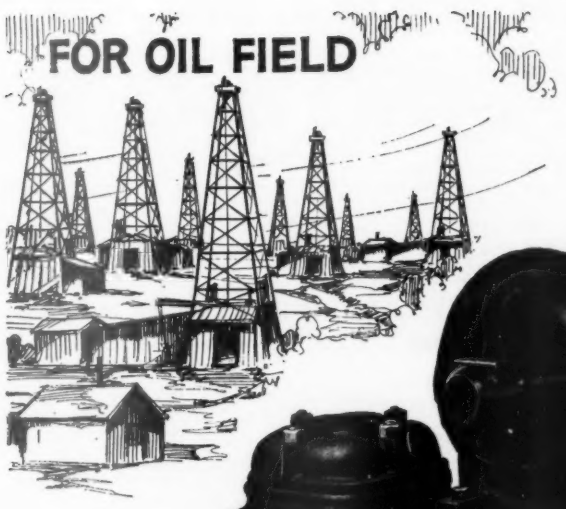
(Barrels of 42 United States gallons.)

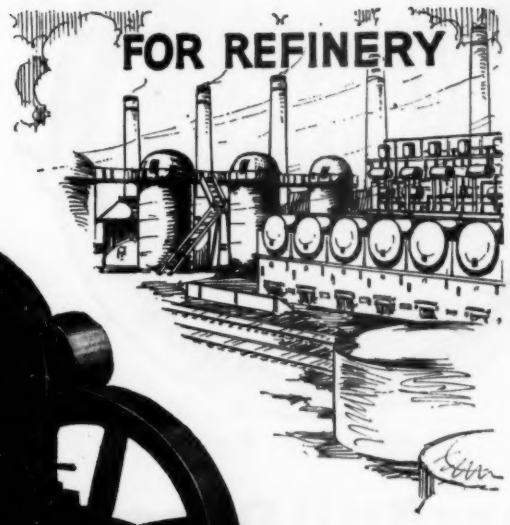
Field—	March, 1926* Total	March, 1926* Daily Av.	April, 1926 Total	April, 1926 Daily Av.	Jan.-Apr., 1926	Jan.-Apr., 1925
Appalachian	2,391,000	77,129	2,379,000	79,300	9,056,000	8,914,000
Lima-Indiana	179,000	5,774	171,000	5,700	665,000	704,000
Illinois-S. W. Ind.	779,000	25,129	633,000	21,100	2,756,000	2,794,000
Mid-Continent	32,460,000	1,047,104	32,754,000	1,091,808	125,973,000	130,667,000
Gulf Coast	2,663,000	85,903	2,665,000	88,833	10,654,000	9,231,000
Rocky Mountain	3,371,000	108,742	3,174,000	105,800	12,515,000	10,919,000
California	18,826,000	607,283	18,092,000	603,059	73,152,000	72,199,000
Total U. S.	60,669,000	1,957,064	59,868,000	1,995,600	234,771,000	235,428,000
State—						
Arkansas	5,242,000	169,097	5,405,000	180,167	20,907,000	14,899,000
California	18,826,000	607,283	18,092,000	603,059	73,152,000	72,199,000
Colorado	193,000	6,226	185,000	6,167	742,000	255,000
Illinois	730,000	23,548	579,000	19,300	2,545,000	2,578,000
Indiana	60,000	1,936	64,000	2,133	253,000	282,000
Southwestern	49,000	1,581	54,000	1,800	211,000	216,000
Northeastern	11,000	355	10,000	333	42,000	66,000
Kansas	3,250,000	104,839	3,376,000	112,533	12,760,000	10,722,000
Kentucky	530,700	17,119	516,500	17,217	2,033,000	2,294,200
Louisiana	1,859,000	59,968	1,899,000	63,300	6,934,000	6,468,000
Gulf Coast	348,000	11,226	335,000	11,167	1,284,000	824,000
Rest of State	1,511,000	48,742	1,564,000	52,133	5,650,000	5,644,000
Montana	762,000	24,580	721,000	24,033	2,321,000	936,000
New Mexico	127,006	4,097	115,000	3,833	486,000	103,000
New York	158,000	5,097	165,000	5,500	613,000	507,000
Ohio	642,000	20,709	610,000	20,333	2,367,000	2,310,000
Central and eastern	474,000	15,290	449,000	14,966	1,744,000	1,672,000
Northwestern	168,000	5,419	161,000	5,367	623,000	638,000
Oklahoma	14,406,000	464,716	14,492,000	483,075	55,522,000	58,469,000
Osage County	2,068,000	66,709	1,968,000	65,600	7,948,000	9,734,000
Rest of State	12,338,000	398,007	12,524,000	417,475	47,574,000	48,735,000
Pennsylvania	726,000	23,419	748,000	24,933	2,762,000	2,533,000
Tennessee	3,300	107	4,500	150	15,000	2,800
Texas	10,366,000	334,387	10,247,000	341,566	40,504,000	49,340,000
Gulf Coast	2,315,000	74,677	2,330,000	77,666	9,370,000	8,407,000
Rest of State	8,051,000	259,710	7,917,000	263,900	31,134,000	40,933,000
West Virginia	499,000	16,097	496,000	16,534	1,889,000	1,905,000
Wyoming	2,289,000	73,839	2,153,000	71,767	8,966,000	9,625,000
Salt Creek	1,653,000	53,323	1,562,000	52,067	6,571,000	7,180,000
Rest of State	636,000	20,516	591,000	19,700	2,395,000	2,445,000
Classification by gravity (approx.):						
Light crude	44,016,000	1,419,871	43,375,000	1,445,833	170,076,000	180,089,000
Heavy crude	16,653,000	537,193	16,493,000	549,767	64,695,000	55,339,000

*Revised.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES (BARRELS)

AT REFINERIES (and in coastwise transit thereto): Reported by location of storage.		Mar. 31, 1926	Apr. 30, 1926	Apr. 30, 1925
East Coast:				
Domestic		6,602,000	6,456,000	8,504,000
Foreign		3,046,000	3,229,000	1,900,000
Appalachian		1,616,000	1,634,000	1,210,000
Indiana, Illinois, etc.		1,571,000	1,727,000	1,574,000
Oklahoma, Kansas, etc.		3,558,000	4,072,000	4,868,000
Texas:				
Inland		740,000	1,025,000	1,282,000
Gulf Coast:				
Domestic		5,975,000	6,642,000	4,438,000
Foreign		266,000	369,000	556,000
Arkansas and Inland Louisiana		690,000	631,000	403,000
Louisiana, Gulf Coast:				
Gulf Coast:				
Domestic		4,217,000	5,102,000	4,660,000
Foreign		1,871,000	1,732,000	1,797,000
Rocky Mountain		1,498,000	1,571,000	1,262,000
Total east of California		31,650,000	34,180,000	32,454,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
New York, Pennsylvania, West Virginia, Eastern and Central Ohio:	Gross	6,952,000	7,192,000	7,243,000
	Net	6,653,000	6,893,000	6,996,000
Kentucky:	Gross	1,908,000	1,887,000	2,263,000
	Net	1,802,000	1,778,000	2,146,000
Lima-Indiana:	Gross	1,084,000	1,091,000	1,367,000





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OIL THIS PUMP ONCE A MONTH

Do you realize how much time and energy it takes to carefully oil a pump every day? Every GARDNER Self-Lubricating Pump installed saves you, thereafter, several days of labor each month.

Furthermore you KNOW the pump is always thoroughly oiled. No bearings overlooked. This means few replacements and long life.

All types of power pumps are offered in this style. Ask for Bulletins EP-1 and EP-2. Territory Available for Agents.

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SHREVEPORT 561 Rutherford St.	HOUSTON 1242 Heights Blvd.	SAN FRANCISCO 401 Rialto Bldg.	LOS ANGELES 684 Santa Fe Ave.	LONDON 25, Bishopsgate, E. C. 2.

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Kirk W. Eickelberger, Rialto Bldg., San Francisco
Emsco Derrick & Equipment Co., 67th and Alameda Sts., Los Angeles
Haywood Williamson Co., Shreveport
International Supply Co., Stores in All Fields
F. W. Heitman Co., Houston
Norvell-Wilder Hardware Co., Houston, Beaumont and Shreveport
Republic Supply Co., Los Angeles

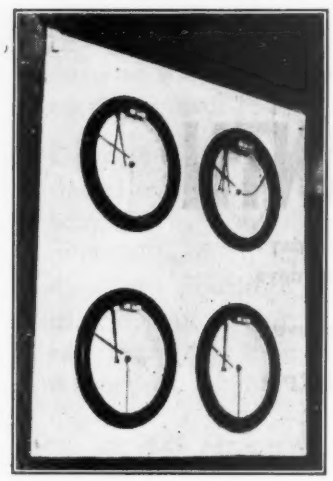
GARDNER GOVERNORS PUMPS · COMPRESSORS

GARDNER

Foxboro Orifice Meter

Change Still Operation From Art to Science

The four Foxboro Instruments illustrated enable an operator in the compressor and pump room of a Bayonne, N. J., Refinery to operate two stills located 200 feet distant.



The three-pen thermometer records oil temperatures in the still, vapor outlet from still tower and temperature of condensate leaving the still. The two-pen gauge records pressures in both stills. One orifice meter records the flow of steam to the still. The second meter records the flow of oil from the absorber.

In the oil industry Foxboro instruments are noted for their supreme accuracy and dependability. They are permanently accurate within less than 1% of total scale range. They will change the control of your processes from a matter of guesswork to an exact science. Write for Bulletin.

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FOXBORO

REG. U. S. PAT. OFF.

THE COMPASS OF INDUSTRY

Illinois-S. W. Indiana:	Net	882,000	889,000	1,154,000
	Gross	11,947,000	12,250,000	11,470,000
	Net	11,468,000	11,771,000	10,982,000
Mid-Continent:				.....
Oklahoma; Kansas; Central, North and West Texas:	Gross	157,081,000	154,037,000	183,200,000
	Net	144,638,000	141,341,000	171,565,000
Northern Louisiana and Arkansas:	Gross	45,303,000	44,647,000	35,538,000
	Net	43,079,000	42,470,000	33,744,000
Gulf Coast:	Gross	17,635,000	16,606,000	20,086,000
	Net	17,261,000	16,266,000	19,676,000
Rocky Mountain:	Gross	29,909,000	30,167,000	28,982,000
	Net	29,863,000	30,122,000	28,942,000
Total pipe line and tank farm stocks east of California:	Gross	271,819,000	267,877,000	290,149,000
	Net	255,646,000	251,530,000	275,205,000
Foreign crude petroleum on Atlantic Coast		102,000	56,000	231,000
Foreign crude petroleum on Gulf Coast		312,000	312,000	492,000
		414,000	368,000	723,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of California		287,710,000	286,078,000	308,382,000
CLASSIFICATION BY GRAVITY (approx.):				
East of California:				
Light crude (24 degrees and above)		227,928,000	229,088,000	.....
Heavy crude (below 24 degrees):				
Domestic		59,368,000	56,622,000	.....
Foreign		414,000	368,000	723,000
CALIFORNIA:				
Light		43,996,000	38,634,000	44,040,000
Heavy (including fuel)		87,682,000	*85,656,000	62,565,000

*Includes 800,000 bbls. pipe line working stock not previously reported. This item has been a constant figure in the past.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (BARRELS)

(From Bureau of Foreign & Domestic Commerce)

	March, 1926		April, 1926		Jan.-Apr.,	Jan.-Apr.,
	Total	Daily Av.	Total	Daily Av.	1926	1925
Imports	7,216,000	232,774	5,906,000	196,867	21,499,000	24,395,000
From Mexico	5,252,000	169,419	4,406,000	146,867	15,983,000	22,093,000
From other countries	1,964,000	63,355	1,500,000	50,000	5,516,000	2,302,000
Exports	966,000	31,161	1,308,000	43,600	4,506,000	4,126,000
Domestic crude oil—						
To Canada	822,000	26,516	971,000	32,367	3,631,000	2,591,000
To other countries	143,000	4,613	337,000	11,233	874,000	1,483,000
Foreign crude oil	1,000	32	.....	.....	1,000	52,000

Note: No crude shipments to territories during April, 1926.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES TO DOMESTIC CONSUMERS (BARRELS)

(Production plus imports minus exports plus stocks, exclusive of consumers' stocks, at beginning of month minus stocks at end of month.)

Domestic petroleum by field of origin:	March, 1926*		April, 1926		Jan.-Apr.,	Jan.-Apr.,
	Total	Daily Av.	Total	Daily Av.	1926	1925
Appalachian	2,481,000	80,032	2,163,000	72,100	8,877,000	9,058,000
Lima-Indiana	202,000	6,516	164,000	5,466	747,000	771,000
Illinois-S. W. Ind.	312,000	10,065	330,000	11,000	1,567,000	2,682,000
Mid-Continent	34,381,000	1,109,065	36,660,000	1,222,000	138,598,000	135,916,000
Gulf Coast	2,908,600	93,806	3,660,000	122,000	13,651,000	9,755,000
Rocky Mountain	2,922,000	94,258	2,915,000	97,167	11,373,000	10,649,000
Deliveries and exports	43,206,000	1,393,742	45,892,000	1,529,733	174,813,000	168,831,000
Deliveries	42,541,000	1,372,290	45,158,000	1,505,267	171,675,000	165,697,000
Foreign petroleum	7,333,000	236,548	5,952,000	198,400	21,537,000	24,354,000
Deliveries of domestic and foreign petroleum	49,874,000	1,608,838	51,110,000	1,703,667	193,212,000	190,051,000

*Revised.

NUMBER OF PRODUCING OIL WELLS COMPLETED*

March, 1926	1,304
April, 1926	1,417
January-April, 1926	5,015
January-April, 1925	4,529

*For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

(From Panama Canal Record)

	Mar., 1926	Apr., 1926	Jan.-Apr., 1926	Jan.-Apr., 1925
Crude oil: Long tons (2,240 lbs.)	151,000	218,000	696,000	886,000
Barrels (approx.)	1,087,000	1,568,000	5,004,000	6,382,000
Refined products: Barrels (approx.)	1,814,000	1,309,000	5,654,000	3,715,000
Fuel oil	726,000	145,000	1,338,000	64,000
Gas oil	338,000	478,000	1,350,000	274,000
Gasoline	750,000	452,000	2,432,000	2,542,000
Lubricants	.....	68,000	206,000	133,000
Tops	.....	166,000	328,000	702,000

COMPARATIVE ANALYSES OF MAJOR REFINED PRODUCTS, APRIL, 1926, AND PRECEDING MONTHS

	Production	*Imports	*Exports	Stocks End of Period	Domestic Demand
Gasoline (gals.):					
February	863,525,000	17,133,000	120,304,000	1,858,659,000	650,718,000
March	969,543,000	21,701,000	133,996,000	1,936,336,000	779,571,000
April	987,633,000	19,057,000	184,891,000	1,926,725,000	831,410,000
Motor Fuel (gals.):					
February	903,000,000	.....	.....	.....	.....
March	1,007,900,000	.....	.....	.....	.....
April	1,027,300,000	.....	.....	.....	.....
Kerosene (gals.):					
February	197,992,000	34,000	66,253,000	287,994,000	131,397,000
March	230,378,000	50,000	74,950,000	293,907,000	149,565,000
April	210,488,000	22,000	68,973,000	294,603,000	140,841,000
Lubricants (gals.):					
February	101,893,000	56,000	33,128,000	332,176,000	53,484,000
March	110,182,000	165,000	31,075,000	320,883,000	90,565,000
April	112,131,000	131,000	38,365,000	309,476,000	85,314,000
Wax (lbs.):					
February	49,922,000	668,000	28,709,000	123,964,000	20,690,000
March	55,329,000	456,000	25,005,000	130,241,000	24,403,000
April	54,985,000	647,000	31,560,000	136,084,000	18,329,000
Gas and fuel oils (gals.):					
February	1,136,823,000	66,573,000	133,997,000	†900,670,000	.....
March	1,244,967,000	39,786,000	98,312,000	†851,234,000	.....
April	1,210,724,000	48,197,000	145,963,000	†830,481,000	.....
April, 1925, for comparison:					
Gasoline (gals.)	871,597,000	10,241,000	109,194,000	1,717,592,000	798,584,000
Kerosene (gals.)	200,497,000	72,000	80,481,000	433,260,000	141,701,000
Lubricants (gals.)	107,467,000	270,000	38,457,000	290,058,000	78,966,000
Wax (lbs.)	48,868,000	448,000	24,627,000	103,310,000	16,456,000
Gas and fuel oils (gals.)	1,237,012,000	47,189,000	120,238,000	†860,706,000	.....

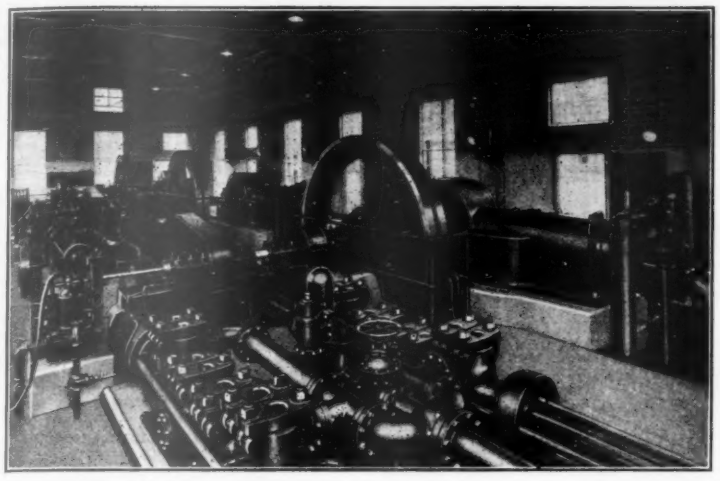
*From Bureau of Foreign & Domestic Commerce. Exports, except for wax, include shipments to Alaska, Hawaii and Porto Rico.
†These stocks for east of California only.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN UNITED STATES, APRIL, 1926

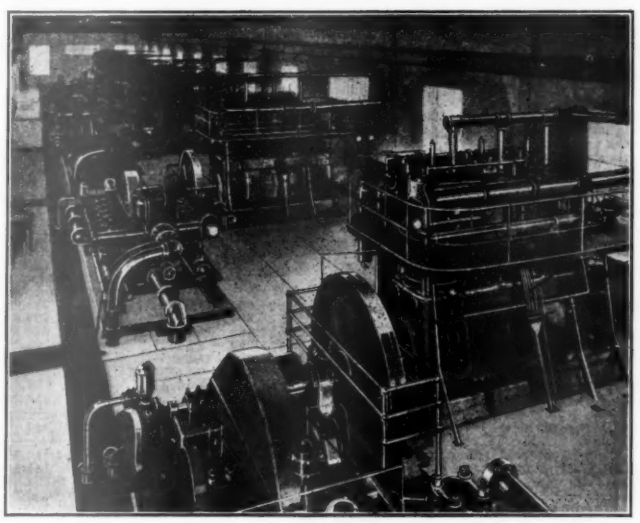
Oils Run to Stills (Barrels)

	Crude Oil—		Unfinished Oils	Nat. Gas Gasoline	Total Oils Run to Stills
	Domestic	Foreign			
East Coast	7,582,000	2,089,000	909,000	382,000	10,962,000
Appalachian	2,187,000	.....	109,000	21,000	2,317,000
Indiana, Illinois, etc.	5,613,000	.....	402,000	76,000	6,091,000
Oklahoma, Kansas, etc.	7,494,000	.....	260,000	226,000	7,980,000
Texas	11,998,000	460,000	751,000	341,000	13,550,000
Louisiana and Arkansas	4,870,000	1,041,000	200,000	65,000	6,176,000

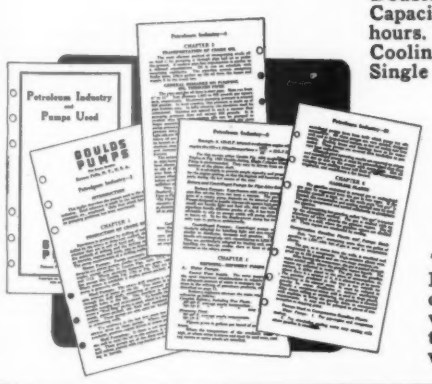
GOULDS PUMPS



Pure Oil Pipe Line Company, Huffman Station
Line Pumps—3 Goulds Horizontal, Double Acting, Duplex.
Capacity each 9,000 to 10,000 barrels per 24 hours. Pressure 825 lbs.
Cooling Water Pumps—3 Goulds Vertical Triplex.



Well-Known Texas Pipe Line
Line Pumps—6 Goulds Horizontal, Double Acting, Duplex.
Capacity each 16,000 barrels per 24 hours. Pressure 750 lbs.
Cooling Water Pumps—6 Goulds Single Cylinder, Double Acting.



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Republic 8" Casing in Oklahoma

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REPUBLIC IRON & STEEL COMPANY

GENERAL OFFICES:

REPUBLIC BLDG. YOUNGSTOWN, OHIO

SALES OFFICES:

Boston New York Philadelphia Detroit Birmingham
St. Louis San Francisco Cincinnati Chicago
Pittsburgh Dallas Denver

Rocky Mountain	2,304,000	.....	579,000	79,000	2,962,000
California	15,651,000	.....	*701,000	385,000	16,737,000
U. S. Total	57,699,000	3,590,000	3,911,000	1,575,000	66,775,000
Daily av., April, 1926	1,923,000	119,700	130,000	52,500	2,225,200
Daily av., March, 1926	1,891,000	124,800	106,000	54,700	2,176,500
Texas Gulf Coast	9,212,000	460,000	687,000	310,000	10,669,000
Louisiana Gulf Coast	3,244,000	1,041,000	163,000	1,000	4,449,000

Output and Losses

	Gasoline Gallons	Kerosene Gallons	Gas and Fuel Oils (Gals.)	Lubricants Gallons	Wax Pounds
East Coast	148,363,000	44,080,000	184,967,000	33,132,000	22,284,000
Appalachian	38,324,000	13,688,000	20,816,000	15,802,000	7,957,000
Indiana, Illinois, etc.	131,906,000	14,314,000	73,043,000	11,062,000	6,580,000
Oklahoma, Kansas, etc.	166,170,000	30,011,000	103,702,000	9,427,000	4,453,000
Texas	212,974,000	52,049,000	225,556,000	28,105,000	4,616,000
Louisiana and Arkansas	61,808,000	27,360,000	112,210,000	2,993,000	6,066,000
Rocky Mountain	56,098,000	7,356,000	29,270,000	2,495,000	3,029,000
California	171,990,000	21,630,000	461,160,000	9,114,000	.....
U. S. Total	987,633,000	210,488,000	1,210,724,000	112,131,000	54,985,000
Daily av., April, 1926	32,921,000	7,016,000	40,357,000	3,738,000	1,833,000
Daily av., March 1926	31,276,000	7,432,000	40,160,000	3,554,000	1,785,000
Texas Gulf Coast	169,409,000	43,807,000	173,350,000	27,380,000	4,046,000
Louisiana Gulf Coast	46,834,000	25,417,000	63,428,000	2,937,000	6,066,000

	Coke Tons	Asphalt Tons	Other Fin'd Prod. Gals. Gallons	Unfinished Prod. Gals. Gallons	Losses Barrels
East Coast	13,460	88,175	4,587,000	945,000	421,000
Appalachian	1,825	.....	678,000	1,238,000	121,000
Indiana, Illinois, etc.	21,761	16,632	4,214,000	2,307,000	212,000
Oklahoma, Kansas, Etc.	8,536	677	1,292,000	7,472,000	335,000
Texas	11,271	14,370	171,000	22,782,000	509,000
Louisiana and Arkansas	11,350	34,470	7,224,000	30,723,000	131,000
Rocky Mountain	7,828	2,197	36,000	24,957,000	26,000
California	.....	42,077	5,838,000	*13,818,000	227,000
U. S. Total	76,031	198,598	24,040,000	104,242,000	1,982,000
Daily av., April, 1926	2,534	6,620	801,000	3,475,000	66,100
Daily av., March, 1926	2,603	6,793	810,000	2,975,000	66,400
Texas Gulf Coast	9,619	14,370	46,000	11,106,000	412,000
Louisiana Gulf Coast	10,718	32,958	6,767,000	27,406,000	71,000

*Includes 203,000 bbls. net tops rerun.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, APRIL, 1926

(Gallons)

	Straight Run	%	Cracked	%	Nat. Gas Gasoline	%	Total
East Coast	77,103,000	52	55,216,000	37	16,044,000	11	148,363,000
Appalachian	26,567,000	70	10,875,000	28	882,000	2	38,324,000
Indiana, Illinois, etc.	77,195,000	58	51,519,000	39	3,192,000	3	131,906,000
Oklahoma, Kansas, etc.	110,443,000	66	46,235,000	28	9,492,000	6	166,170,000
Texas	119,912,000	56	78,740,000	37	14,322,000	7	212,974,000
Louisiana and Arkansas	38,457,000	62	20,621,000	33	2,730,000	5	61,808,000
Rocky Mountain	28,090,000	50	24,690,000	44	3,318,000	6	56,098,000
California	155,820,000	91	.....	..	16,170,000	9	171,990,000
U. S. Total	633,587,000	64	287,896,000	29	66,150,000	7	987,633,000
U. S. Total, March, 1926	614,670,000	63	283,683,000	30	71,190,000	7	969,543,000
*Tex. and La. Gulf Coasts	117,199,000	54	85,982,000	40	13,062,000	6	216,243,000

*Included above under Texas, Lauisiana and Arkansas.

STOCKS HELD BY THE REFINING COMPANIES IN UNITED STATES, APRIL 30, 1926

	Gasoline Gallons	Kerosene Gallons	Gas & Fuel Oils Gals.	Lubricants Gallons
East Coast	401,542,000	57,594,000	193,071,000	103,992,000
Appalachian	44,411,000	7,368,000	20,687,000	36,434,000
Indiana, Illinois, etc.	271,600,000	25,964,000	35,769,000	31,923,000
Oklahoma, Kansas, etc.	165,192,000	11,834,000	135,623,000	19,189,000
Texas	228,239,000	59,007,000	280,757,000	69,637,000
Louisiana and Arkansas	168,948,000	43,631,000	108,085,000	4,367,000
Rocky Mountain	203,063,000	11,043,000	56,489,000	7,646,000
California	443,730,000	78,162,000	.....	36,288,000
U. S. Total	1,926,725,000	294,603,000	830,481,000	309,476,000
U. S. Total, March 31, 1926	1,936,336,000	293,907,000	851,234,000	320,883,000
Texas Gulf Coast	203,065,000	50,779,000	242,316,000	68,324,000
Louisiana Gulf Coast	163,723,000	43,172,000	78,261,000	4,363,000

	Wax Pounds	Coke Tons	Asphalt Tons	Other Fin. Prod. Gals	Unfin'd. Oils Bbls.
East Coast	60,994,000	7,793	143,075	6,219,000	7,588,000
Appalachian	16,727,000	476	42	1,829,000	1,037,000
Indiana, Illinois, etc.	28,597,000	11,656	17,378	23,078,000	3,355,000
Oklahoma, Kansas, etc.	3,219,000	22,632	927	3,774,000	1,932,000
Texas	7,462,000	59,565	8,378	260,000	7,707,000
Louisiana and Arkansas	10,293,000	60,435	28,848	2,908,000	2,837,000
Rocky Mountain	3,744,000	53,515	9,428	114,000	1,724,000
California	48,000	.....	31,877	9,618,000	*12,605,000
U. S. Total	136,084,000	216,162	239,953	47,800,000	38,795,000
U. S. Total, March 31, 1926	130,341,000	219,820	195,052	51,119,000	39,098,000
Texas Gulf Coast	7,345,000	55,314	8,378	141,000	7,061,000
Louisiana Gulf Coast	10,293,000	58,851	28,512	2,624,000	2,683,000

*Includes 5,100,000 bbls. tops in storage.

NATURAL GASOLINE APRIL, 1926

The production of natural gas gasoline in the United States for the month of April, 1926, amounted to 109,617,000 gallons, a daily average of 3,654,000 gallons. This represents practically the same rate of production as for the preceding month, when record figures were set. As has been the case of late, the Oklahoma-Kansas territory showed a material gain. Stocks of raw gasoline at the plants amounted to 3,352,000 gallons, April 30, 1926, a decrease during the month of 250,000 gallons.

	Natural Gas Gasoline Production *(Net)	Natural Gas Gasoline Stocks End of Month	Blended Motor Fuel: Natural Gas Gasoline Used in Blends	Blended Motor Fuel: Naphtha or Other Oils Used in Blends	Blended Motor Fuel: End of Month
Appalachian	8,694,000	3,438,000	259,000	327,000	348,000
Indiana, Illinois, etc.	1,588,000	318,000	61,000	13,000	25,000
Oklahoma, Kansas, etc.	42,224,000	11,208,000	2,720,000	4,921,000	2,277,000
Texas	18,260,000	4,142,000	217,000	783,000	469,000
Louisiana and Arkansas	6,006,000	903,000	.....	.....	6,000
Rocky Mountain	3,569,000	354,000	95,000	188,000	185,000
Total east of California	80,341,000	20,363,000	3,352,000	6,232,000	3,310,000
California	29,276,000	914,000	**	**	**
Total United States	109,617,000	21,277,000	3,352,000	6,232,000	3,310,000
Daily average	3,654,000	.....	.....	.....	.....

*1 per cent estimated. **Not available.

The indicated output of motor fuel in the United States from the above and other sources may be expressed by the following table:

(Gallons)	March	April
Gasoline produced at refineries	969,500,000	987,600,000
Natural gas gasoline produced at plants	113,100,000	109,600,000
*Benzol production	7,500,000	7,200,000
Less natural gas gasoline blended at refineries	71,200,000	66,200,000
Less natural gas gasoline run through refinery pipelines	11,000,000	10,900,000
Total United States	1,007,900,000	1,027,300,000
Daily average	32,500,000	34,240,000

*Estimated with production of by-product as basis.

ESTIMATES VARY ON LAKOTA SAND OUTPUT

(Continued from Page 32)

averaged 3,145 bbls. in the month of February, 1925. It is evident that the pay was in the top 46 feet of sand.

Five other wells which were drilled through the sand showed the following results:

No. 6-L, NW cor. NW NE, Section 35-40-79, had 128 feet of sand and an initial production of 534 bbls. of oil; No. 34-X, SW cor. SE NW, Section 23-40-79, 49 feet of sand, initial production, water and no oil; No. 7-L, CWL NW SE, Section 25-40-79, 75 feet of sand, initial production 275 bbls. of oil and 1,025 bbls. of water; No. 4-L, NE cor. NW SW, Section 2-39-79, 132 feet of sand; initial production water with a showing of oil.

Several shale streaks or breaks were evident in the sand. Its average thickness is 85 feet and the top 30 to 40 feet is saturated. On the data thus far known, the report says, the production of the wells would not be materially increased by penetrating the entire thickness of the sand body.

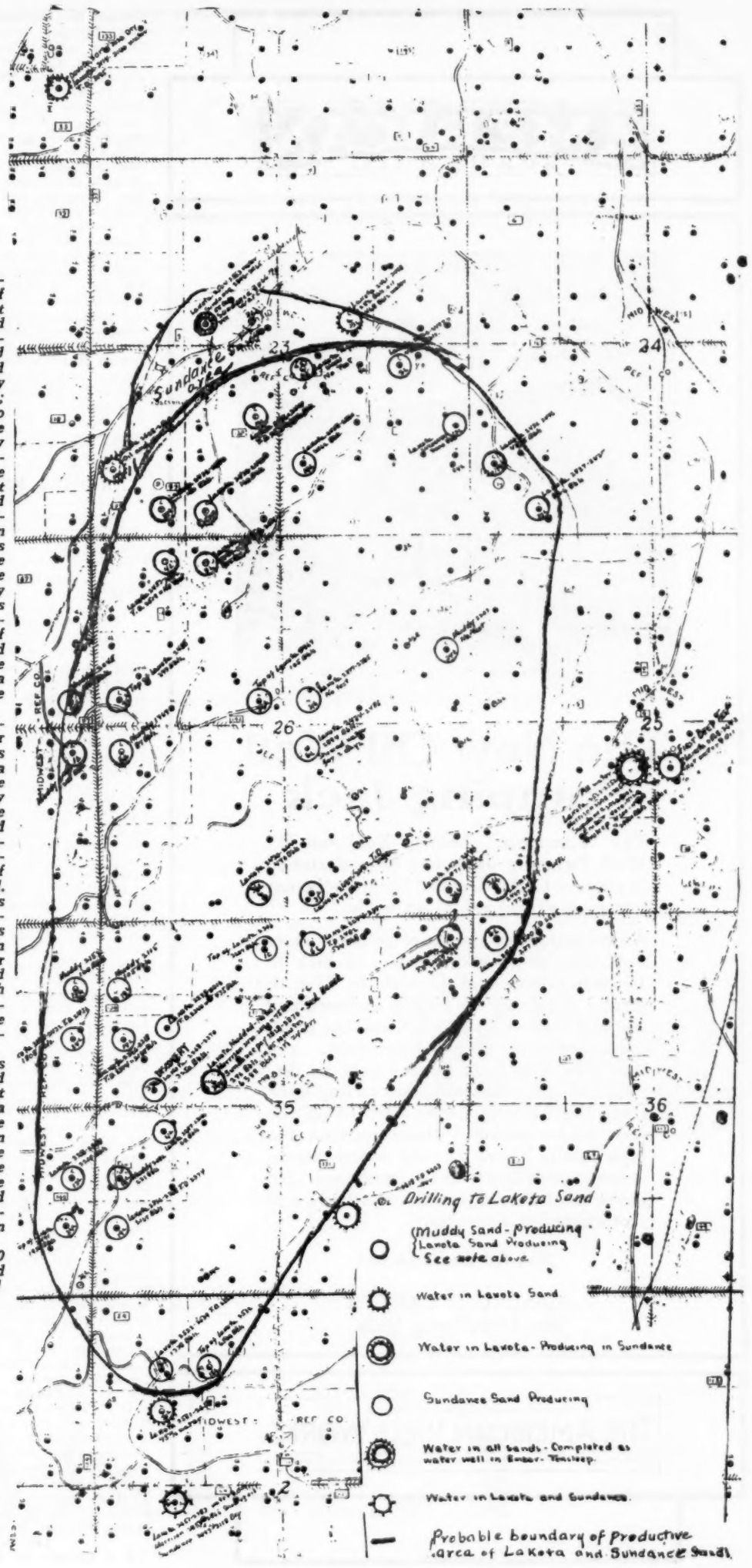
Variation in Initial Production

A great variation is shown in the initial production of the wells, notably the following:

No. 15-L, SW cor. NE NW, Section 2-39-79, in the south end of the Lakota sand area, had an initial production of 6,500 bbls. in the very top of the sand, while one location to the southwest, No. 21-L, NE cor. SW NW, Section 2-39-79, with 68 feet of sand, was a failure. Seventy-five per cent of the initial production was water. In the north end of the Lakota sand area, well No. 13-L, SE cor. NE SE, Section 23-40-79, with 62 feet of sand, had an initial production of 8,000 bbls., while the well northwest of it, with 77 feet of sand, had an initial production of 4,556 bbls. a day. The well just southwest of the 8,000-bbl. well, with 44 feet of sand, started off with a production of 4,555 bbls. Well No. 6-L, NW cor. NE, Section 35-40-79, practically in the center of the Lakota sand area, had 128 feet of sand and a 534-bbl. initial production. The north offset, No. 31-L, SW cor. SE, Section 26-40-79, with 15 feet of sand, had a first-day production of 173 bbls. No. 1-L NE cor. NW, Section 35-40-79, the southeast offset to No. 6-L, had an initial production of 3,207 bbls. from the top of the sand. No. 36-L, northwest offset to No. 6-L, SE cor. SW, Section 26-40-79, drilled 10 feet into the sand, produced 471 bbls. the first 24 hours.

The Sundance Is Important

Beneath the Lakota sand lies the Morrison, Sundance, Embar and Tensleep sands. Two wells drilled to the Sundance formation were producers and two were failures. There are three sands in the Sundance formation in the Salt Creek Field. Between the first and the second is an interval of 125 feet. The second sand consists of about 90 feet of hard lime and sand. Between the second and the third sands the interval is 75 feet. The third sand is about 42 feet thick. One Sundance producing well, No. 34-X, SW cor. SE NW, Section 23-40-79, in the north end of the field, got the second sand at 2,896-2,965 feet. This sand yielded 55 bbls. of oil the first 24 hours with no water. The third sand at 3,066-75 feet, 9 feet in the sand, yielded water and no oil. On top of the structure, well toward the south of the productive area, No. 34-X, SW cor. SE NW, Section 35-40-79, was dry in the second sand at 2,506-26 feet. The third sand, 2,828-70 feet, yielded 6,388 bbls. of 36.3 gravity oil the first 24 hours in a wide-open test. The well is through the sand and in shale at 2,870 feet. No water was encountered with the oil. The temperature of the oil was 90 degrees. The well is shut in. In the extreme south end of the area No. 4-L, NE cor. NW SW, Section 2-39-79, was dry in the entire Sundance series, 3,093-3,118 feet. On the east side in No. 12-L, CEL NE SW, Section 25-40-79, the Sundance series yielded water at 2,964-3,005 feet. The well was drilled



The accompanying map of a part of the Salt Creek Field shows all the Lakota sand and Sundance sand wells, both dry and producing; wells drilled to the top of the sand or a few feet in the Lakota sand, where they were shut down; the sand records and initial production and the wells drilling to the Lakota sand. The data is as of May 1, 1926. It shows the probable producing area of the Lakota sand and the probable productive area of the Sundance sand.

Nine wells developed water and are failures in the Lakota sand. These were edge wells. They establish the water line and define the boundary of the productive area of the Lakota sand.

Fifteen wells have been completed; that is they have been drilled either through the sand or far enough into it to determine that the wells are producers.

Sixteen wells have been drilled only a few feet into the Lakota sand, or have been shut down on top of the sand. These showed oil in the top of the sand and will be producers when completed.

As a whole, 40 wells have found the Lakota sand

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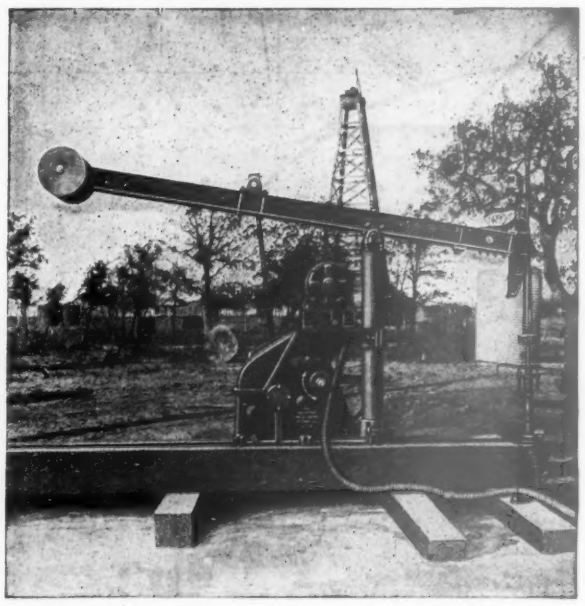

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to 4,400 feet and tested the Dakota, Lakota, Morrison, Sundance, Embar and Tensleep sands. Water was found in each sand, the entire volume from all the sands being 29,000 bbls. a day.

If the sands in the two Sundance producers have been positively identified, says the report, the indications are that the Sundance sand, like the Lakota sand, will be irregular in productivity and that the ultimate recovery from the different parts of its productive area will vary. The productive area of the Sundance sand cannot be defined at this time. It will extend a little to the north of the Sundance well No. 34-X, SW cor. SE NW, Section 23-40-79, and some distance south of the Sundance well, No. 34-X, SW cor. SE NW, Section 35-40-79. Other wells will have to penetrate the Sundance sand around the edge of the area before the productive area can be determined. The report expresses the opinion that the Sundance area will be approximately the same as the Lakota sand area. The report made no attempt to estimate the ultimate recovery from the Sundance Field because of the meagerness of the information now available.

ARTESIA, NEW MEXICO

(Continued from Page 48)

at 1,422 feet, salt water having been encountered in what is believed to have been the Glorietta sand.

Eddy County Drilling

Colorado Drilling Co.'s No. 1 Irvin, SE SE, Section 8-16-27, shut down. Compton's No. 2 Mann permit, Section 3-18-27, shut down. Compton, Hasenfuss & Lieuallen's No. 1, SW SW, Section 16-18-28, on production. Decum Development Co.'s No. 1 Vandagriff, NE cor. SE, Section 5-17-28, drilling below 2,000 feet. Dunn Oil Co.'s No. 1 NW, Section 22-17-31, location. Empire Gas & Fuel Co.'s No. 1, SE cor. SW SW, Section 35-17-27, drilling below 700 feet. Flynn, Welch & Yates' No. 39, SE, Section 21-18-28, drilling below 2,875 feet; No. 43, SE cor. NE, Section 28-18-28, drilling at 2,750 feet; No. 45, NE SE, Section 21-18-28, cleaning out after shot; No. 4 Keyes, NW cor. Section 21-18-28, drilling below 800 feet; No. 46, Section 28-18-28, drilling below 1,400 feet; No. 47, Section 28-18-28, drilling below 1,700 feet; No. 48, Section 21-18-28, drilling below 700 feet. Fletcher Oil Co.'s No. 1, SW, Section 5-19-28, on the pump. H. F. Hall and others' No. 1, Section 27-17-31, a location. Hasenfuss & Donley's No. 2, NW cor. NE NE, Section 13-18-27, spudding. Harris & Rehn's No. 1 Winans, NW NE, Section 15-18-26, drilling below 700 feet. Hamilton Petroleum Co.'s No. 1 Billings, Section 12-19-26, drilling. Ohio Oil Co.'s No. 2 New States, SW SE, Section 8-18-28, moving rig to location; No. 5 Toomie Allen, NE SE, Section 28-18-28, on production; No. 9 New State, SE SW SE, Section 4-18-28, running tubing after shot. Picher Oil Co.'s No. 3, SE, Section 12-18-27, drilling below 1,000 feet. Swartz, Compton & Eaton's No. 1 Brainard permit, NE cor. SW, Section 5-18-27, resumed drilling below 1,595 feet. Sun Oil Co.'s No. 1, Section 21-25-30, rigging up. Twin Lakes' No. 8, NW cor. SW, Section 28-18-28, drilling in at 2,625 feet. Texas Production Co.'s No. 5, NW NE NE, Section 8-18-28, drilling below 2,000 feet. The Texas Company's No. 5 on George Bobb permit, center of Section 17-17-28, drilling below 2,130 feet in hard gray lime. Wade & Bujac's No. 1 Goodale NW NW, Section 19-18-29, resumed drilling. Wooley & Jones' No. 1 Beeson, SE cor. Section 33-17-30, drilling below 2,100 feet.

Chaves County

D. C. Devito and others, SW, Section 24-11-26, spudding. Dunn and others' No. 1, Section 8-11-23, rigging up for 3,500-foot test. Neal and others' No. 1, Section 25-9-25, abandoned at 1,422 feet. Rogers and others' No. 1, NE, Section 15-11-26, pumping 5 bbls. The Texas Company's No. 1, Dunken Dome, SW, Section 29-17-28, drilling below 400 feet.

Lea County

J. S. Covert's No. 1, Section 15-21-33, underreaming at 420 feet. Inglefield and others, Section 4-17-34, rigging up. Lloyd Simons' No. 1 Simons permit, SW cor. Section 29-17-32, drilling below 200 feet. Maljamar Oil & Gas Corp.'s No. 1 Baish, NE, Section 21-17-32, drilling at 3,935 feet; No. 1, Grace Mitchell permit, SW cor. Section 5-17-32, standard rig erected, ready to commence drilling; No. 1, S. Beardsley permit, NE cor. Section 5-17-32, running 12½-inch casing; No. 1, Pearsall permit, NE cor. Section 33-17-32, waiting for tools; No. 1, William Mitchell permit, SW cor. Section 17-17-32, validating hole; No. 1 Pear Mitchell permit, NW, Section 23-17-32, validating hole. Shugart and others' No. 1, SE SW, Section 1-17-31, a location.

SUBSTANTIAL INCREASE SHOWN IN CRUDE RUNS

(Continued from Page 31)

there back on a normal basis after a brief period of low runs.

In the Oklahoma list, two plants, those of the Fairmount Refining Co. at Fairmount and the Newkirk Oil & Refining Co. at Newkirk, have been eliminated. The Newkirk plant has been shut down a year. The Fairmount plant is being dismantled by the Champlin Refining Co. and the equipment moved to the main Champlin plant at Enid.

Substantial increases in runs by the Skelly Oil Co. at El Dorado and the Roxana Petroleum Corp. at Arkansas City swelled the total Kansas throughput to 93,250 bbls. on June 1. A 1,000-bbl. increase was made at the Augusta plant of the White Eagle Oil & Refining Co. while smaller gains were made at other refineries. The plant of the Red Bird Refining Co. which has been shut down a year, was removed from the list this month.

New Plants in Texas

Among north Texas refiners runs were increased only 5,370 bbls. daily. With few exceptions, only slight changes were made in these plants. Twenty-three hundred barrels of the increase was accounted for by the starting up of operations by the Texas Pacific Coal & Oil Co. at its new plant at Fort Worth. This plant, formerly owned by the Montrose Oil & Refining Co. has been remodeled and modernized by the new owners.

Another new company in Texas is the Western Oil Corp., which recently purchased the plant of the Sunshine Consolidated Oil Co. at Wichita Falls and is starting operations. Resumption of operations by the Dale Oil & Refining Co. at Wichita Falls also added 1,800 bbls. to the total north Texas increase in runs.

North Texas will have another operating plant within a few weeks as the Sullivan Refining Co. is setting up a plant in the Panhandle oil field. The equipment is from the old Big Four Refining Co. plant at Panhandle which is being dismantled. The Sullivan company purchased the Big Four plant some time ago and has nearly completed the removal to the field.

Six north Texas plants, five of which have been shut down a year, have been removed from the accompanying list. These plants include the Big Four Refining Co. at Panhandle, the Bridgeport Refining Co. at Bridgeport, Four States Refining Co. at Texarkana, Humble Oil & Refining Co. at Hearne, Mexia Oil & Refining Co. at Mexia and the Tiger Refining Co. at Breckenridge.

In Arkansas operations Cross Refining Co. plant at Smackover started up after a fire there the first of May. However, the Houston Oil Co. at Camden reduced its runs materially. Four plants, however, made fair sized increases.

North Louisiana refiners made the biggest reduction which totaled more than 5,000 bbls. daily. The outstanding reduction was by the Louisiana Oil & Refining Co. which cut operations 5,500 bbls. daily. A decline of 250 bbls. by the Crystal Oil & Refining Co. added to this reduction but two other plans increased runs 700 bbls.

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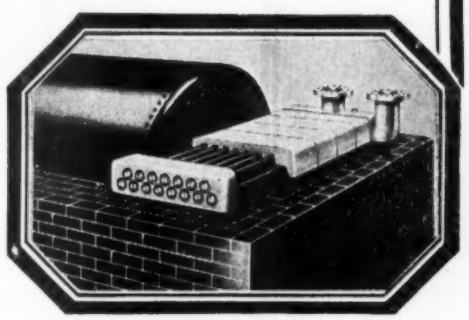

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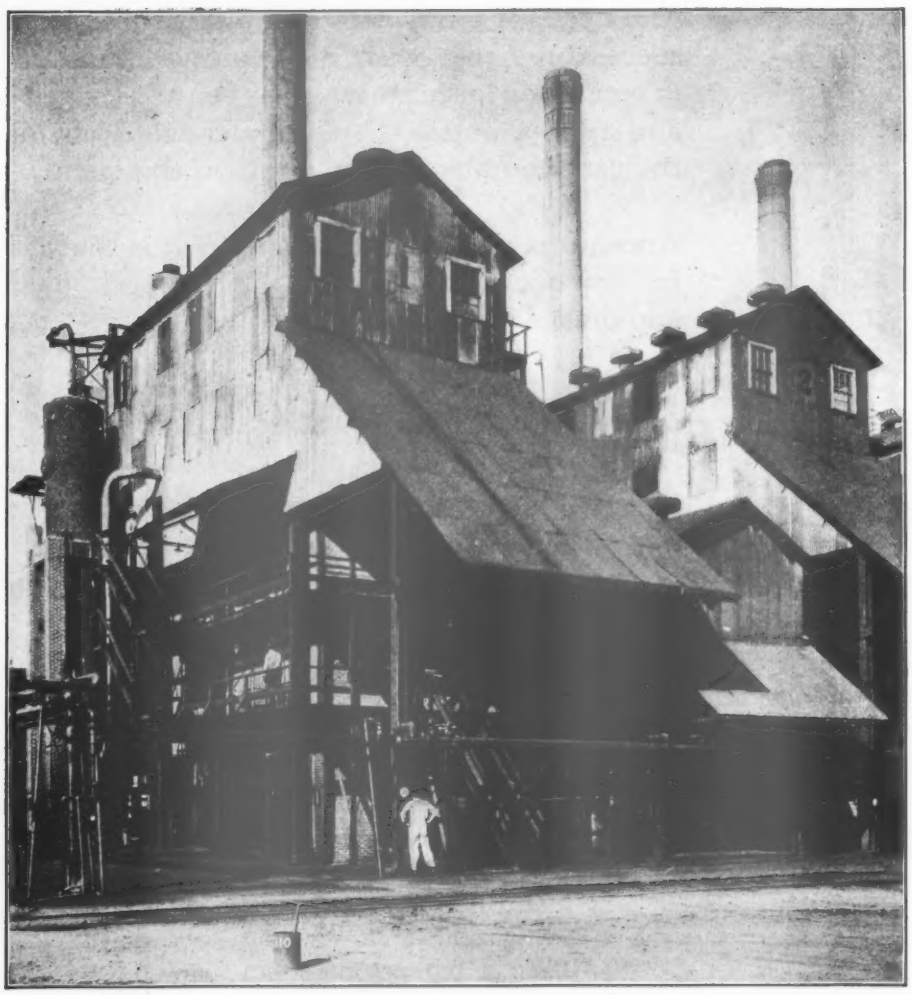

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CENTRAL OHIO GAS OPERATORS ARE BUSY

(Continued from Page 66)

In Middleburg Township, Cuyahoga County, the East Ohio Gas Co. is drilling a test on the P. and A. Jenke 12 acres, Section 15. In Dover Township, Daugherty Brothers are drilling a est in the northwest corner of the J. Gessner 20 acres, Section 28.

Cassingham & Bell Brothers drilled a light gas well in No. 12 on the Cassingham farm, Lot 5, Newcastle Township, Coshocton County. The Logan Gas Co. is drilling No. 1 in the southwest corner of the C. B. and N. Ogle 317 acres, Lot 31, and made a location for a test in the northwest corner of the William Johnson 38 acres, Lot 13, as well as a test 190 feet from the north line and 770 feet from the west line of the C. L. Shrimplin 30 acres, Lot 12, same township. In Monroe Township, the Ohio Oil Co. is drilling a test 660 feet from the north line and 600 feet from the east line of the Guy Pyers 82 acres, Lot 2. In Pike Township, same county, W. H. Miller and others staked a location for a test in the northwest corner of the Charles E. Moore 100 acres, Lot 8. The Logan Gas Co. is drilling No. 1 in the northeast corner of the Rudolph T. Rine 147 acres, Lot 15, Perry Township, same county.

In Carthage Township, Athens County, the Logan Gas Co. is drilling a test in the northeast corner of the J. M. and M. Barnhill 150 acres, Lot 23 and No. 1 in the northeast corner of the J. B. and S. Ninngemeyer 156 acres, Lot 33, and made a location for a test 1,020 feet from the north line and 400 from the west line of the Eaton Chase 140 acres, Lot 3. The Preston Oil Co. is drilling No. 7, C. and L. Pugh farm, same township.

Wildcat Duster

The Savannah Oil & Gas Co.'s wildcat on the L. C. McClain 110 acres, Section 13, Clear Creek Township, Ashland County, failed to find any sand where the Clinton formation should be found and developed a dry hole.

In Green Township, Ashland County, the Logan Gas Co. is drilling its first well 950 feet from the south line and 1,500 feet from the west line of the J. R. Walton 57 acres, Section 29. Same company is drilling No. 5 well, 640 feet from the south and west lines of the P. C. Cowan 350 acres, Section 21, Hanover Township, same county, and the Ohio Fuel Gas Co. started the drill at a test 300 feet from the north line and 660 feet from the west line of the M. D. Leterow 20 acres, Section 27. In Orange Township, same county, the Logan Gas Co. is drilling No. 1 well, 660 feet from the south and east lines of the J. A. Albright 80 acres, Section 4, as well as its No. 1 on the K. H. Flute farm, Section 8.

In Medina County, Granger Township, the Empire Gas & Fuel Co. started the drill at its test in the southeast corner of the A. Rockwood 30 acres, Lot 55. In Litchfield Township, Hulse & Kundtz are drilling a test 345 feet from the north line and 2,415 feet from the east line of the Cora B. Pfeifer 100 acres. Lot 28, and the Logan Gas Co. set a stake for No. 9 well, 1,500 feet from the south line and 660 feet from the east line of the Leland R. Seeley farm, Lot 49. Same company is drilling a test 600 feet from the north and east lines of the Frank Patlowany 87 acres, Lot 4, York Township, same county. In Brunswick Township, the Ohio Fuel Gas Co. has a location for a test near the southwest corner of the Delpha J. Hitchcock 55 acres, Lot 17.

In Lorain County, Grafton Township, the Logan Gas Co. is drilling a test 1,000 feet from the north line and 50 feet east of the highway, on the Joseph A. Rising 89 acres, Lot 90, while in Columbia Township, the same company made a location for No. 1 near the southeast corner of the Jacob Landin 86 acres, Lot 93.

In Wayne County, Franklin Township, the Ohio Oil Co. is drilling No. 11 well 825 feet north of the highway and 1,190 feet from the east line of the D. E. and Ida Schmuck 137 acres, Section 23. W. E. Hawk and others are drilling their first test, 1,412 feet from the north line and 400 feet from east line of the C. S. and C. A. Eby 134 acres, Section 6, Green Township, same county. Glen Harmon and others struck a gas pocket with a volume close to 2,250,000 feet, in a second test 980 feet from the north line and 40 from the east line of the Clayton Good 44 acres, Section 36, Congress Township, but will continue the hole down to the Clinton, the gas being found in a stray sand. In Baughman Township, the Logan Gas Co. made a location for a test 660 feet from the north line and 675 feet from the west line of the Lorena King 80 acres, Section 17.

In Holmes County, Monroe Township, the Empire Gas & Fuel Co. is drilling a test in the southwest corner of the Oscar Steel 115 acres, Lot 6. The Ohio Fuel Gas Co. found a dry hole in a test on the Yost Weaver 100 acres, Section 31, Paint Township, same county, and made a location for a test 660 feet from the south and west lines of the Dan C. Wengard 65 acres, Section 6.

In Hardy Township, Holmes County, the East Ohio Gas Co. is drilling No. 3 on the D. R. Anderson 100 acres, Section 2. The Pure Oil Co. is drilling a second test on the Warren R. Close 84 acres, Section 9, abandoned location No. 5 on the Warren R. Close 14 acres, same section, and is drilling at its test in the southeast corner of the Mrs. Wilson Pyers, Section 34. In Kilbuck Township, same county, the East Ohio Gas Co. set a stake for a test 660 feet from the north line and 650 feet from the west line of the Christian Miller 80 acres, Section 22, also a stake for a test, 670 feet from the north line and 750 feet from the east line of the Jacob A. Middaugh 64 acres, Section 23. In Salt Creek Township, same county, the Empire Gas & Fuel Co. will do a little wildcatting on the Adam Karch 100 acres, Lot 7, and located 525 feet from the north end of the farm, which is the Greenville Treaty line and 300 feet from the west line of the farm.

Offside Developments

The Muskingum Gas Co. drilled a light gas well at a second test on the Clarence McMains, Section 16, Barlow Township, Washington County, in the Maxburg 500-foot sand and contemplates drilling for a deeper pay sand. Same company's No. 4 John Gordon, Fractional Section 1032, same township, struck salt water in the Big Injun sand and abandoned the hole. Same company's No. 1 Samuel Burchett, Section 16, is a fair Big Injun sand gasser, and a very fair gas well on the M. G. Lawton No. 3 Fractional Section 1025, as well as an average gasser in No. 2 J. R. Lawton Fractional Section 1028; No. 3 R. C. Smith Fractional Section 694, showed a volume of 1,250,000 feet; No. 2 Clarence McMains, Section 16, 1,150,000 feet, and No. 1 L. C. Martin Fractional Section 1029, is drilling close to pay sand.

Ellison and others drilled in a very light Maxon sand gasser at No. 9 on the E. and D. Shaw farm, Fractional Section 671, Dunham Township, Washington County. Goddard and others on the Mack McVickers, Section 695 and Barnett & Pedrew's well on the Christopher, Section 1, Barlow Township, same county, are nice gassers. The Ohio Fuel Supply Co. struck an average gas well at a test on the J. G. Seeley, Section 1030, same township.

KENTUCKY-TENNESSEE

(Continued from Page 58)

same district, are drilling; No. 20 C. K. Dobyne No. 2 farm; No. 8 Herbert Skaggs farm, and No. 30 Sanford Lyon farm, all in District 22-A, are drilling. No. 18 George Evans, District 33, is cleaning out, preparatory to putting on the pump with a good showing, and No. 14 on the Martha Kelley farm, District 22-A, is drilling, all for the Swiss corporation. No. 19 J. M. Fyffe farm, Dis-

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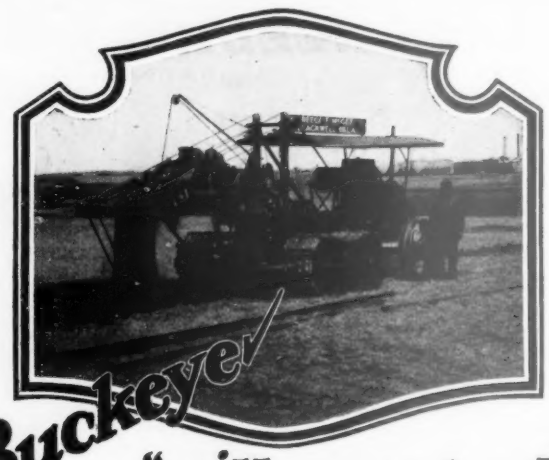

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It requires a good machine and wonderful performance to enthuse an owner to make this statement.

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trict 33, for the same company, started spudding.

Four completions are reported from the Ophir Field, in District 30 of Morgan County. Conley Brothers' second well on the Willie M. Blanton farm, is reported at 5 bbls. Ralph Stafford and others' No. 1 on the Pelphrey heirs farm, shows for 3 bbls.; Pelphrey heirs' No. 1 on their own farm is a 3-bbl. producer, while F. M. Tackett and others' No. 1 F. M. Tackett farm is a 10-bbl. pumper. This field is west of the Hayden Williams area and southwest of the Red Bush Field. Several strings of tools will be at work in the Ophir Field as soon as they can get started on new locations staked out.

A large area has been leased up, according to reports, in the Indian Creek section of Knox County, in the southeastern part of the state, and plans made for the drilling of 10 wells on the Indian Creek Dome.

Western Division

There is not the revival of work expected in the western division of Kentucky, especially in Warren and Allen Counties, although the Owensboro district, Barren and Cumberland-Monroe-Adair Counties are more active sections. Very little wildcatting is under way, that is, any work a distance from present production.

Barren County

Light pumpers were the best to be found the past week in the Glasgow Field of Barren County. Coombs and others' well on the Grady farm, in the Coral Hill-Lecta Pool, struck oil in the Black shale at 303 feet, but drilled through the pay and struck water, which they will plug off if it will not be possible to deplete it by pumping. This well looks very good, as the hole filled 235 feet with oil inside of an hour after striking pay. In the same area, the Esslinger Oil Co.'s No. 5 on the C. B. Jones farm, upon which the discovery well of the pool was found, has been completed and has been abandoned as dry. No. 6, same farm, is drilling.

In the Knob Road district, the Star Oil & Gas Co.'s No. 3 on the Richardson farm proved a duster. Ziegler Brothers are due in with No. 4 C. D. Boyd farm and No. 2 on the Boyd Brothers farm.

In the Gorby Pool, south and west of Glasgow, Lew J. Emery, Jr., Sons Nos. 3 and 4 on the Jones farm are rated at 10 bbls. flush each. The Watson Oil Co. (Hope Construction & Refining Co.) is due to complete No. 3 on the Dearing lease. Hiland Oil & Gas Co.'s No. 17 Casaday and J. W. Porter's No. 17 McGlochlin, are both due to drill in.

In the Hall-Baker Pool, Harrington and Norris Brothers' No. 4 Hutcheson lease, is showing for a 4-bbl. pumper, and the same people are drilling No. 12 R. E. Evans farm.

In the Emery-Moore Pool, Fred C. Moore's No. 8 on the Bruton farm is good for 6 bbls. The Houchins Leasehold brought in Nos. 11 and 12 Mayfield farm, estimated at 8 bbls. each at 582 and 545 feet respectively. No. 9 on the Bruton farm, for Fred C. Moore, is drilling.

Owensboro District

The Owensboro district of Hancock, Ohio and Daviess Counties, reports six completions during the week, with six more wells drilled in but not yet put on the pump. There has been a scarcity of water for drilling purposes which has delayed a number of wells that should now be on the pump.

The Leeper Oil Co.'s No. 3 on the R. B. Powers' 40 acres, in the area of the Swope Pool, and 350 feet east of No. 1, same farm, is reported a 10-bbl. pumper from the Jett sand. The same company's No. 1 on the W. A. Probst 37 acres and southwest of the No. 1 on the Monroe Collier well, is reported at 10 bbls. in the Jett sand.

The White Plains Oil & Gas Co. (Snowden's interests) was disappointed in the initial venture on the William Coleman 125 acres, which proved a dry hole in the Stray, Jett and Barlow sands, although indications were good when the two first sands were passed through. This company's second well on the Orella Ralph 78 acres, 400 feet southeast of No. 1 on the same farm and offsetting No. 3 Midkiff farm, in the Midkiff Pool, proved a 10-bbl. pumper in the Barlow sand.

The Panther Creek Oil Co.'s No. 11 on the John W. Smith 120 acres is a 10-bbl. pumper from the Jett sand, while Tremor and Thompson's No. 1 on the C. Roach 130 acres, three-quarters of a mile northwest of the Midkiff farm production, drilled in a duster in the Jett sand.

Near Completions

Six new wells have drilled into the sand in the Owensboro district that are yet to be connected before their values are known. The White Plains Oil & Gas Co.'s No. 1 on the 50 acres of the Joe Bob Ellis farm, south of the railroad, makes a very good showing in the Jett sand, where it will be put on the pump and tested out, or drilled deeper for the Barlow sand.

The Leeper Oil Co. shot No. 9 on the Lon R. Helm farm, in the Collier Pool, in the Hurricane section, and shows for an excellent pumper. Seven of the nine wells drilled on this lease have proved among the good wells of the field, and on the same lease that No. 8 a couple of weeks ago came in with a production of 182 bbls. the first day's gauge and holding up remarkably.

The Greasy Creek Oil Co. has what shows for a light pumper in its No. 8 on the Dave King farm, in the Hurricane district, and 400 feet west of No. 7, same farm.

The Pennsylvania-Indiana Oil Syndicate's No. 4 on the Laura Mercer 84-acre farm, and 400 feet of No. 2 on the same farm, is showing around 25 bbls., while the same concern's No. 2 on the C. W. Kelley 260 acres and 400 feet north of No. 1, same farm, is showing similar to the late well on the Mercer farm.

The No. 5 well of the Chicago Petroleum Syndicate on the Guenther-Gant farm, in the Swope Pool, that made such a nice showing in the Jett sand, may prove another big producer for that farm. No. 6 will be started as soon as No. 5 is put on the pump.

W. F. Stevenson has been delayed with a fishing job at his second well on the north 80 acres of the Guenther-Gant farm. The White Plains Oil & Gas Co. moved in a rig for a second test on the John Ward 50 acres and is also starting No. 2 on the J. R. Brown farm. Johnson and Engle are starting a test on the L. L. Trogden 90 acres.

Cumberland-Monroe-Adair

Development work is to be pushed by Louisiana parties in the Hopewell Pool, along the dividing line of Cumberland and Adair Counties, where good shallow sand wells are found. The only bad feature of the pool at this time, is that there is no market for the crude, but the fact that two Paragon Development Co.'s men have been looking over the field recently may mean the extension of its lines that run into Cumberland County to the Hopewell Pool. As soon as a market is provided for the new field, work will start in earnest. This pool is to the north of the Crocus Creek district.

In the Hopewell-Crocus Creek area Baird & Hickman have completed their No. 4 on the J. H. Morgan farm for a 50-bbl. pumper from the first Sunnybrook sand at a depth of 295 feet. This company is drilling a well on top of a hill on the Elliott farm, and at last report had reached a depth of 250 feet, but will require the drill to go to a depth of at least 500 feet to get into the first Sunnybrook. Their No. 1 on the Haden Hadley farm, on Sand Lick, is around 200 feet and is being closely watched by the scouts now in the field. Crawford & Webster are nearing a depth to find something soon at a test on the Hi. Jackman farm, on the north side of the field and in Adair County. Phillips and others are shut down at 200 feet on the Patterson farm waiting for orders as to what will be done.

The test of the Elbow Oil Co. on the H. Cloyd farm, on Judio Creek, is close to the proper depth to find pay sand, as

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4 Years & *a quarter*

have been spent to build the New Rex Deep Well Chabelco 1030-DW3 & 1240-DW4

Rollers and bushings of drawn seamless tubing are accurately cut to size in special automatic cut-off machines

Each seamless roller will fit closely to the bushing and sidebars. The bushings in turn will fit snugly in the sidebars, and close around the pins. No play will develop there

On riveted chain, the pins are riveted in a specially designed Electric Riveter

The alloy steel pins can be riveted securely only by electrically generated heat

During the four years that Rex Deep Well Chabelco has been in preparation, hundreds of oil-field men, drillers, superintendents, engineers and executives have been asked what they wanted most in oil well chains. Boiled down, the replies were:

1. **A Chain that would have long life.**
2. **A Chain that would not suddenly give way while the tools were in the hole.**
3. **A Chain that would not stretch.**
4. **A Chain that would not rattle apart.**
5. **A Chain in which the sidebars would not back off the bushings.**
6. **A Chain that was flexible and smooth riding.**
7. **A Chain that would be easy of assembly in the field.**

To build such a chain, the Chain Belt Company has spent four years and a quarter of a million dollars in experimental work and tooling up.

This Company now announces Rex Deep Well Chabelco 1240-DW4 and 1030-DW3, the greatest chains ever built for oil well drilling.

Deep Well Chabelco is the last word in Rex—the genuine Chabelco, that has stood up to the highly destructive service of the oil fields.

The big point is this—Rex Deep Well Chabelco Chains 1240-DW4 and 1030-DW3 overcome every objection found in either riveted or cottered oil well chain as produced heretofore. Both fit standard sprockets.

Don't be satisfied until you see them. When you do, you will agree that nothing like them has ever been built before. In the meantime, send for the folder that will tell you more about Rex Deep Well Chabelco. The coupon will bring it.

The New Rex Pin Lock that overcomes the disadvantages of riveted pins or cotters

This pin lock makes it easy to assemble the chain in the field, to take out or add links. As simple as the cotter, it is positive and sure

Ground Pins and Bushings

The pins and bushings of Deep Well Chabelco are ground by centerless grinding, giving a smooth-wearing surface accurate to 1/1000 of an inch.

There are no rough surfaces to wear their own bearings, so the chain will not stretch, and the close clearance aids materially in producing a chain of high tensile strength. The ground pins and bushings make the chain fit closer on the sprockets, eliminate play and consequent wear.

With the tighter all-'round fit, the chain will not stretch to destroy pitch, it will run true over the sprockets for the entire term of its working life, which also will be lengthened.

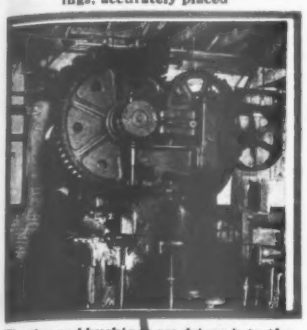
Ending a Problem as Old as Rotary Drilling

The cotter pin does not stand up to oil-field work. With riveted chain it is extremely tough to take out a link, take down the chain or assemble it in the field. The new Rex Pinlock gives Rex Deep Well Chabelco the advantages of both the cotter and the riveted pin, without the drawbacks of either.

REX Deep Well

# of a million dollars

Sidebar holes are broached and offset in one operation in especially made dies, making smooth seats for pins and bushings, accurately placed



The pins and bushings are driven into the absolutely parallel broached holes, tightly, but without shearing. The pins will hold and will not cut out the sidebars

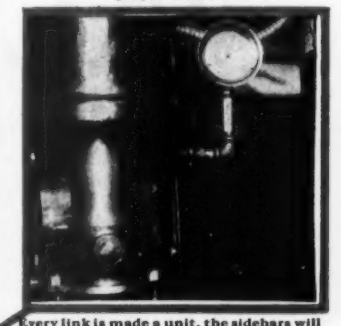
Sidebars are blanked and punched at one operation from alloy steel, making them accurate in every dimension

The right amount of metal at each point gives proper strength without excess weight

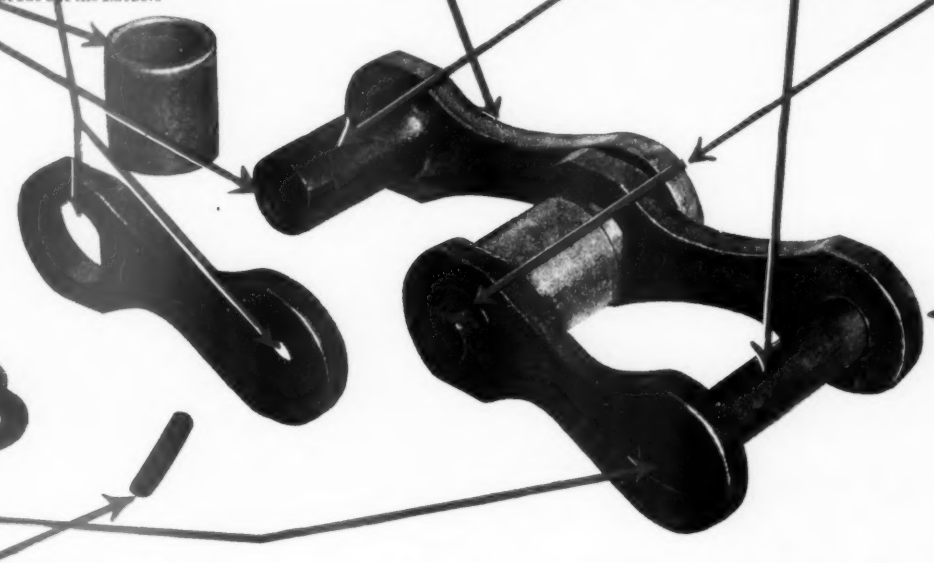
Pins and bushings are ground smooth and to exact dimensions by centerless grinding

Smoother bearing surfaces will wear longer, and the links can be assembled with closer tolerance, making the chain more accurate

Accurately made parts are assembled by the slow, smooth stroke of pressure recording machinery, giving every link the proper force fit



Every link is made a unit, the sidebars will not back off the bushings, the chain will not rattle apart



Pins are smooth forged and finished

The pins are smooth, the head is true to size and free from destructive fins or projections—because they are accurate, they have the proper fit at every point of contact

Automatic Controlled Heat Treating Furnaces and Quenching Equipment make possible the correct heat treating of every pin

Sidebars, pins, rollers and bushings are heat-treated to develop the desired strength, toughness and wearing qualities

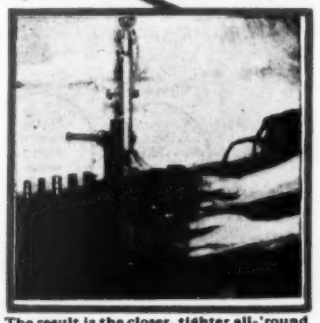
In this laboratory, hundreds of tests have proven the metal in Rex Chabelco—

The steel in every part of this chain has been scientifically selected for its special fitness

The 100,000-pound Dynamometer Testing Bench tests every chain before it leaves the factory

Every chain must be right to pass the inspection tests at this station

"Go" and "Not-Go" gauges check the work of precision manufacturing at every point



The result is the closer, tighter all-'round fit and close accuracy that means longer life to the chain in service

Rex Deep Well Chabelco 1030-DW3 is an A. P. I. 3 Chain.
The tensile strength of 1030-DW3 is 45,000 lbs.

Rex Deep Well Chabelco 1240-DW4 is an A. P. I. 4 Chain.
The tensile strength of 1240-DW4 is 90,000 lbs.

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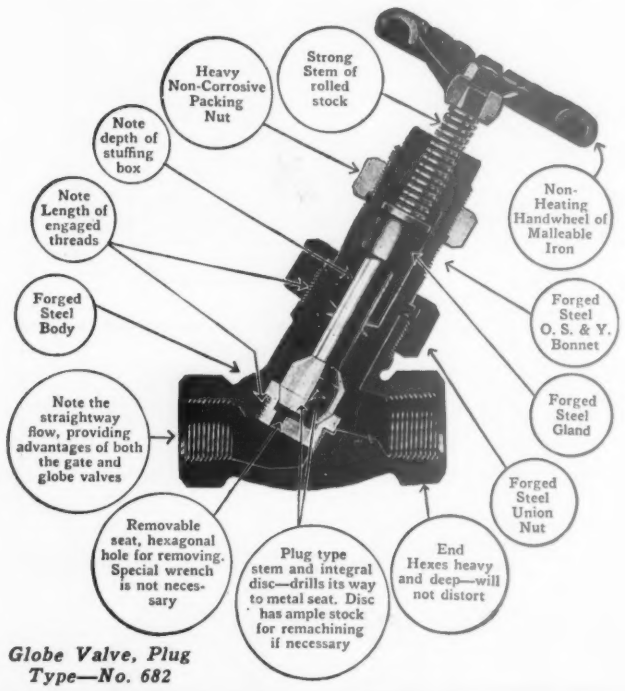
Heavy Non-Corrosive Packing Nut
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Note depth of stuffing box
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Forged Steel O. S. & Y. Bonnet
Note the straightway flow, providing advantages of both the gate and globe valves
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Removable seat, hexagonal hole for removing. Special wrench is not necessary
Plug type stem and integral disc—drills its way to metal seat. Disc has ample stock for remachining if necessary
End Hexes heavy and deep—will not distort

Globe Valve, Plug Type—No. 682

the last report was that the well had reached a depth of 420 feet.

Wilcox Bothers are moving a drilling outfit to the J. A. Melton farm, on Williams Prong of the Sulphur Creek district. In the Sulphur Creek district, W. S. Raydure and Son's No. 5 on the M. E. Coop farm, that started at the rate of 8 bbls. an hour, after being put on the pump, has declined to a 15-bbl. pumper, and the well will be drilled deeper in hopes of finding a new pay sand. It was drilled to a total depth of 837 feet, where it got its good production at first.

Other Developments

In the Scottsville Field of Allen County, Fred W. Owens drilled in his Nos. 12 and 13 A. A. Davenport farm, and they show for 3 bbls. each, with Nos. 14 and 15 drilling. Lee Moore is drilling No. 6 on his own farm, and Reaher and others are working at a well on the W. M. Hall farm.

Warren County and the Bowling Green Field failed to report any new completions for the week. T. A. Sheridan has been delayed by a fishing job at 460 feet at his No. 5 Georgianna Davenport farm. The Bull Bayou Homer Co. is shut down at 550 feet at its No. 12 E. G. Savage farm. Lowman & Bolling are drilling No. 7 Ben Price farm. The Zev Oil Co. is around 450 feet at No. 3 E. G. Savage farm. Onsel Brothers are drilling No. 7 on the C. C. Davenport, Section 78, and No. 13 on the Mary Ferguson farm. E. M. Treat and others are around 800 feet at No. 10 Edward & Betty Bass farm. Paul Cooksey is down about 350 feet at his No. 8 John W. Covington No. 8 farm. The Palmer Corp. is drilling No. 4 J. Q. Adams farm.

In Simpson County, Reagle, Clark and others' test on the L. Wilkerson 25 acres is a 2-bbl. pumper at 610 feet.

EASTERN FIELDS

(Continued from Page 62)

lumbiana County, John N. Davidson has a light pumper in the Berea grit at No. 4 on his own farm. In the same section, Canton parties have completed No. 3 on the Hoffman heirs' farm good for 3 bbls. a day in the Berea grit. In Lot 5, Franklin Township, Licking County, Smith & Hazelett are drilling on the Austin Orr farm.

West Virginia

The Big Injun Sand Pool in Henry district, Clay County, continues to complete more wells and furnish more new production than any other district in West Virginia. In this district, the Virginian Gasoline & Oil Co. has completed in the Big Injun sand No. 7 on the Brown, Swan, Goshorn and Sinnett tract. It is estimated to be good for 40 bbls. a day. In the same district, the South Penn Oil Co.'s No. 7, on the R. S. Kyle farm, is good for 30 bbls. a day in the same formation.

On Big run of Bone Creek, Union district, Ritchie County, the Carnegie Natural Gas Co. has completed No. 3 on the A. L. Britton farm. It is not good for more than 2 bbls. a day in the Big Injun sand.

Wirt County

In Burning Springs district, Wirt County, Joseph L. Wilson has completed No. 7 on the A. Eagle farm not good for more than 1 bbl. a day in the Big Injun sand. In the same district, Roberts Brothers have completed No. 145 on the Rathbone Oil Tract and have the same kind of a producer in the second Cow Run sand.

In Lee district, Calhoun County, the Hope Natural Gas Co. has completed a test on the Mary Blake farm. It is a gasser in the Big Injun sand. In Otter district, Braxton County, the Philadelphia Gas Co. has a gasser in the Maxon sand at a test on the Louis Bennett farm. In Center district, Gilmer County, the Mill Fork Oil & Gas Co.'s test on the U. S. Upton farm is a gasser in the same formation.

At the mouth of Little Sand Creek, New Haven district, Mason County, the Ohio Fuel Oil Co. has now completed in the Berea grit its test on the McMillen heirs' farm. It has been put to pumping and producing about 6 bbls. a day. The location is 4,000 feet east of the same company's test on the P. T. Frye farm.

Light Pumper in Doddridge

In West Union district, Doddridge County, C. H. Pigott has completed in the Big Injun sand No. 4 on the B. F. Hefflin farm good for 5 bbls. a day. In McClelland district, Trainer & Ash have a show for a light pumper in the Gordon sand at a test on the U. S. Upton farm.

In Walker district, Wood County, the South Penn Oil Co. completed and shot in the Berea grit No. 18 on the Susan Grant farm good for 5 bbls. a day. No. 19, on the same farm, is drilling. Cogdon and Woodyard have the rig completed for No. 11 on the Elgie Grant farm. In Union district, the White Sand Oil Co. is drilling at 600 feet at No. 3 on the John Rost farm.

Ritchie County

In Murphy district, Ritchie County, Pope Brothers have a very light pumper in the salt sand at a test on the Leonard Donelly farm. In Grant district, the West Virginia Gas Co. has the rig completed for No. 4 on the W. B. Zinn farm. In the same district, M. G. Taylor and others have the rig completed for a test on the Margaret Burffy farm.

In Paw Paw district, Marion County, the Owens Bottle & Machine Co.'s test on the Lee Yost farm is a duster in the fifth sand. In Church district, Wetzel County, the Manufacturers Light & Heat Co.'s test on the W. E. Johnston farm is dry in the same formation. In the same district, Roy Clovis & Co. have a gasser in the Big Injun sand at a test on the W. M. Hixenbaugh farm.

Drilling and Starting Tests

At the close of the week the West Virginia fields had very few completions. On Laurel Creek, Union district, Wood County, the South Penn Oil Co. completed No. 4 on the Daniel Wharton farm, good for 5 bbls. a day in the Berea grit.

On Spring run, Grant district, Ritchie County, Ira Williams & Co. completed No. 32 on the West Virginia tract, a very light pumper. In New Milton district, Doddridge County, Trainer & Travis have the rig completed for a test on the George Ross farm. In the same district, the Carnegie Natural Gas Co. has the rig completed for a test on the A. Sutton farm.

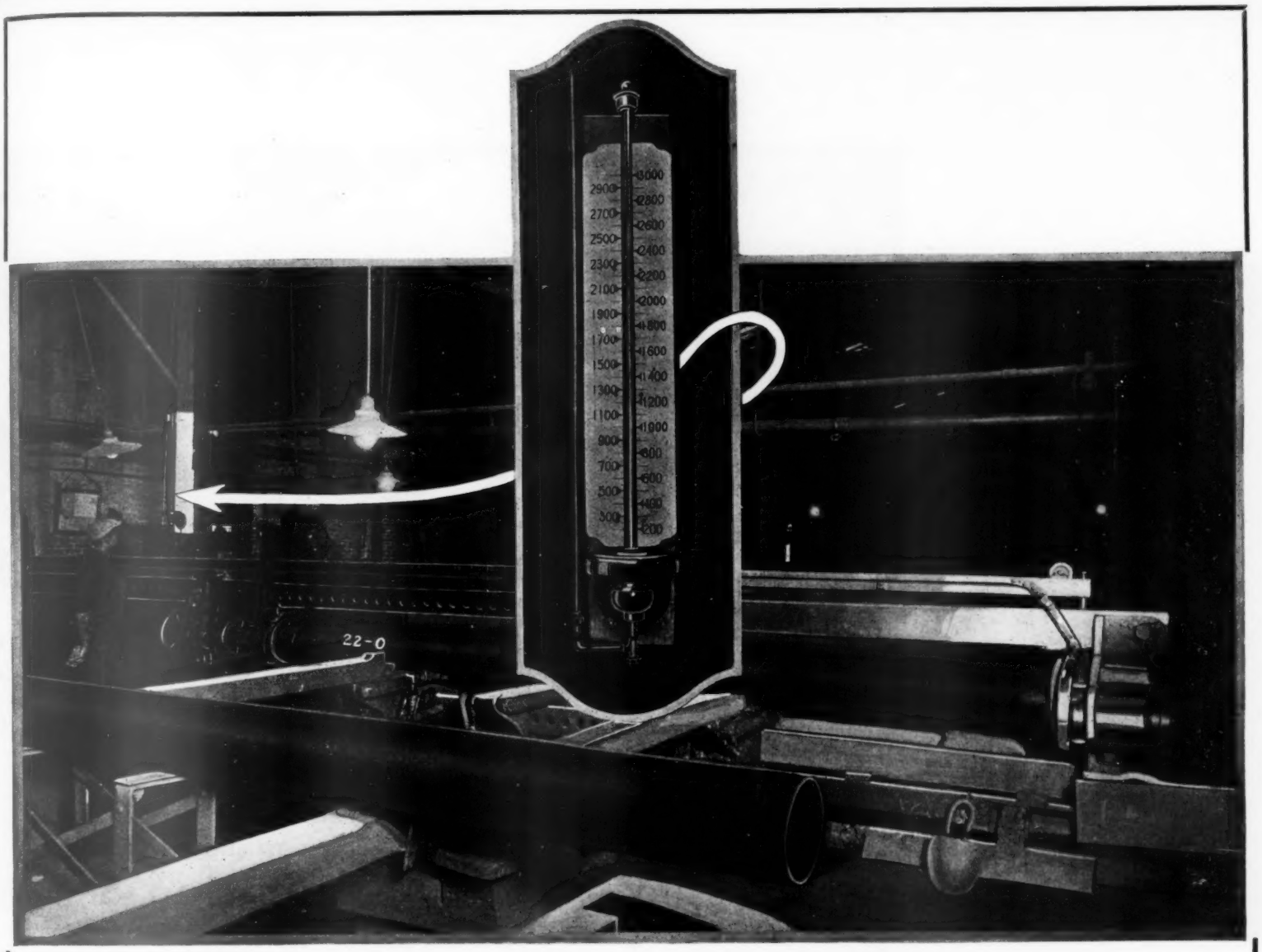
In Henry district, Clay County, the South Penn Oil Co. has completed in the Big Injun sand, No. 22, on the O. D. Stockly farm, good for 30 bbls. a day. In Ten-Mile district, Harrison County, at the mouth of Indian Creek, Marsh & Denninson have completed in the fifth sand a test on the F. H. Haney farm. It was given a shot in the Gordon sand and the hole filled up 120 feet with fluid the first 20 hours. It will make a light pumper.

On Laurel run, Murphy district, Ritchie County, E. E. Pope has completed in the salt sand a test on the E. Donnelly farm, a very light pumper. In Freemans Creek district, Lewis County, the Light & Heat Co.'s test on the Thomas Fahey farm is a small gasser in the Big Injun sand. At Green Castle, Clay district, Wirt County, V. B. Darby and others have a dry hole in the Berea grit at a test on the Heck heirs' farm. On Big Root Creek, of the Kanawha River, W. R. Beckett has the rig completed for a test on the Thomas Wolverton farm.

Roane County

In Smithfield district, Roane County, Douglass Brothers have started to drill a second test on the P. C. Adams farm, 500 feet southeast of the first test. In the same district, T. H. Suter and others have started to drill on the John Young farm. In Proctor district, Wetzel County, a company composed of local parties has a rig completed on the Jack O'Neil farm. On Spruce Creek, Murphy district, Ritchie County, W. A. Bickerstaff and others have a rig completed for a test on the Fairview M. E. Church lot. On Ash Lick Run, Burning Springs district, Wirt County, the Southern Oil Co. has a rig up on the Dewees heirs' farm.

In McClelland district, Doddridge



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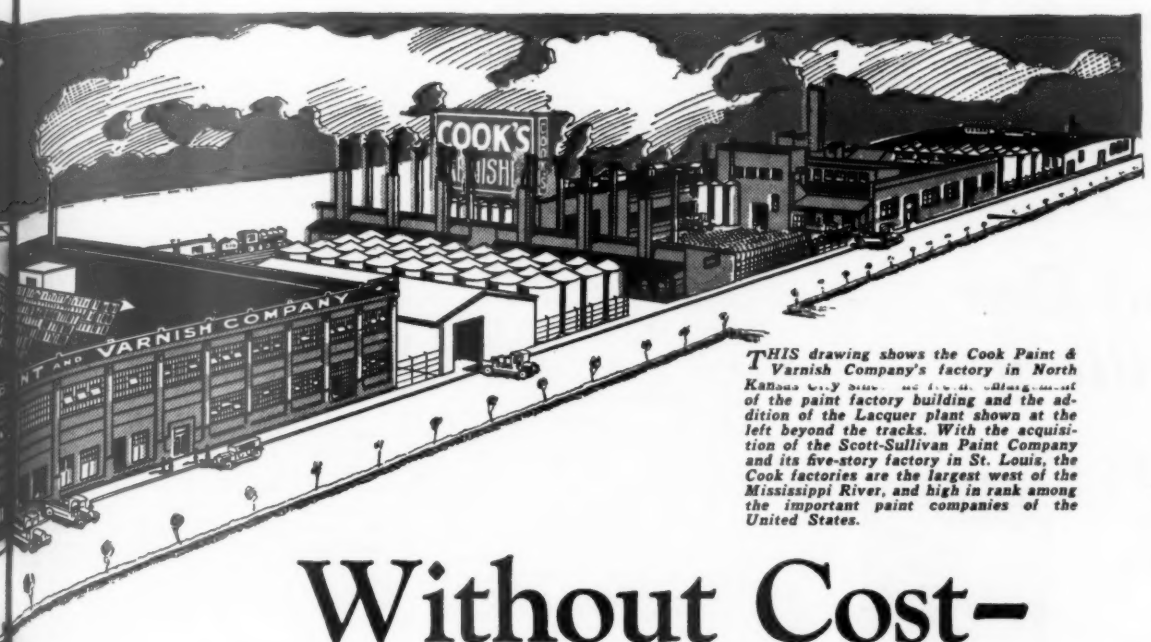

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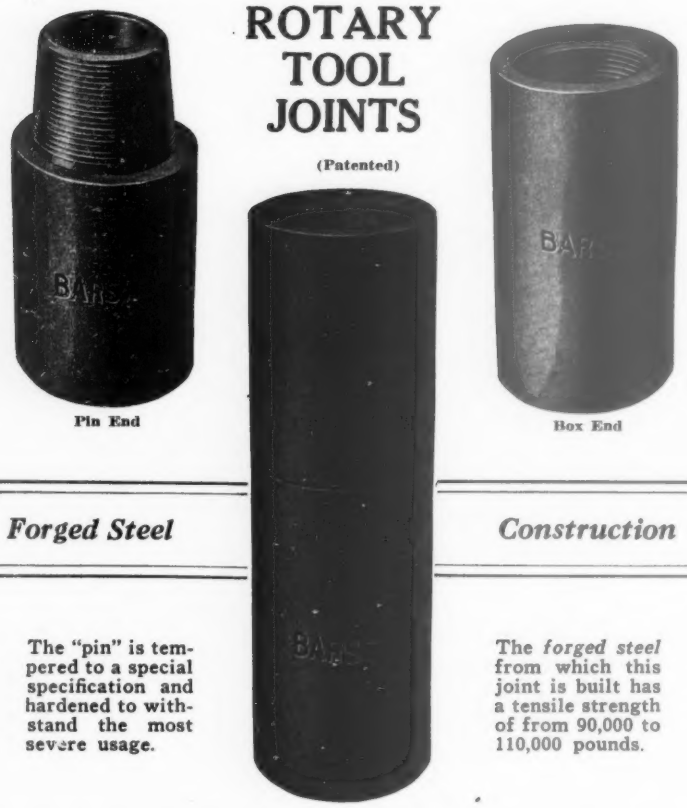
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4	18	5¾	3½x4½	5	70
4	20	5¾	3½x4½	5	75
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County, the Buckeye Oil Co. has a rig up on the William Ford farm. In Ten-Mile district, in Harrison County, the Hampton Oil Co. has a rig up on the J. W. Williams farm. In Simpson district, the Vesper Oil Co. has started to drill on the Flavius B. Davisson farm. In Elk district, the same company has made a location on the Alva Shepler farm. In McComas district, Cabell County, C. C. Wolfe is building a rig on the L. E. Browning farm.

In Reedy district, Roane County, the Heck Oil Co. is building a rig on the A. B. Sheets farm. In Lee district, Calhoun County, the Hope Construction & Refining Co. is rigging up on the Julia L. Cross farm. In the same district, McIntosh & Scott are drilling on the J. M. Morgan heirs' farm. E. G. Smith & Co. are building a rig on the J. E. Smith farm in Skin Creek district, in Lewis County. In Troy district, Gilmer County, the Ohio Fuel Oil Co. has started to drill a second test on the J. E. Smith farm. In Mannington district, Marion County, S. N. Elliott is drilling on the Arlie T. Hibbs farm.

Braxton County

In Birch district, Braxton County, the Ohio Fuel Oil Co. is drilling on the James Bard farm. In Center district, Gilmer County, Satterfield & Co. have started to drill on the J. T. McClain farm. In Liberty district, Marshall County, the Natural Gas Co. of West Virginia has made a location on the Joseph Phillips farm.

In Lafayette district, Pleasants County, Albert Neely is drilling on the Waitman Cumberledge farm. In Jefferson district, Lincoln County, the Cambridge Gas Co. is testing for gas in the Big Lime formation on the Horse Creek Land & Mining Co.'s tract. In Greene district, Wetzel County, A. F. Lawrence has rig material at a location on the E. A. Booth farm. In Union district, Ritchie County, A. L. Britton is rigging up on the J. W. Smith farm. In McClelland district, Doddridge County, Godfrey L. Cabot has started to drill on the R. J. Rogers farm. In Center district, Gilmer County, the Mill Fork Oil & Gas Co. is drilling on the U. S. Upton farm. In Birch district, Braxton County, the Ohio Fuel Oil Co. is rigging up on the James Bard farm.

Southwest Pennsylvania

In Wayne Township, Greene County, the Carnegie Natural Gas Co. has completed in the Bayard sand a second test on the E. C. Henkins farm. It is a gasser good for 700,000 feet.

CENTRAL WEST

(Continued from Page 58)

cat well to be drilled on the P. R. Fisher farm, mapped as the Robert Parkerson farm, Section 6, Bellmont Township, Wabash County, in the east half of the east half of the section, three fourths of a mile southeast of the hamlet of Bellmont; 7 miles west and 2½ miles south of Mt. Carmel; 6 miles west and approximately 9 miles south of the production on the Ezra Bass farm, in Frenedsville, Township, same county, and really the closest production of any value to the new proposed wildcat. There never has been any testing for oil in the immediate vicinity of the test to go down on the Fisher farm, but more in the northern part of Wabash County.

Another test to be carried out this summer, heretofore mentioned, is the Puryear and others projected well on the Clay Moeller farm on the State Road north of Mt. Carmel, plans for which are developing steadily.

A test well is under way on the James R. Helm farm, northwest of Grayville, where a depth close to 250 feet was reached, where a bit was lost in the hole that delayed work at this test, which is southwest of Wabash County and in Edwards County.

Seemed Dry at First

The drilling into the sand by Mayhugh and others in their No. 4 on the Kogan heirs farm, Section 1, Wabash Township, Wabash County, in the Allendale Field, has brought about a little more excitement in the northern portion of the county. The sand in this well was struck last week at 1,373 feet, with an excellent showing of oil. However, the pumping rods were dropped as they were being lowered and when they had been fished out and the pump put into service not a drop of oil could be found and the well seemed to be as dry as the Sahara Desert. Monday the well was shot and a flood of oil gushed forth, and is estimated good for 300 bbls. flush. It is not as large as some of the recent wells in the pool but big enough to convince the public there are still chances for good wells in the vicinity of Allendale. The sand appears to be a new one to the operators in the field. It has been named the "Sugar Sand," and Kohan sand. When a lump of it is first taken from the well it is rather hard and of a limestone gray in color. But when exposed to the sunlight and air for a short time it turns dark, crumbles like sugar and oil of a light grade (27.1 specific gravity) oozes from it. The value of the well will not be known until thoroughly tested out. The Max Oil Co.'s No. 7, on the Holson-Dorney lease, in Section 18, Wabash Township, and east of south of Allendale, struck the sand at 1,438 feet and at 16 feet in the sand started showing oil and drilling deeper. It has all the earmarks of a good well. In the same field, the Eastern Gulf Oil Co.'s second test, 200 feet from the north line and 1,000 feet from the east line of the Jesse Cisil farm, Section 2, is reported at 10 bbls. with top of sand at 1,549 feet and drilled 13 feet in the sand.

In Honey Creek Township, Crawford County, Gealy & McDowell's No. 3, in the northeast corner of the William C. Haas farm, Section 4, pumped 20 bbls. at 1,030 feet.

MICHIGAN FIELDS

(Continued from Page 62)

quarter of Section 10, and a little over a mile west of the Sun Oil Co.'s producer on the Weiss farm. This company is also drilling its test along the west line of the Carl Boldebuck 160 acres in the southeast quarter of Section 2, nearly 1½ miles north of the Sun Oil Co.'s Weiss well. This well has been delayed with a bad fishing job in the Marshall sand at close around 700 feet, where a string of tools are in the hole, and when trying to loosen the tools with a "bumper" they lost the bumper, but have recovered it and are now trying to loosen the tools again.

The Sun Oil Co. is experiencing a bad fishing job also, having two strings stuck in tricky Marshall sand at around 600 feet and is trying to recover them by drilling down along side of them.

The derrick is almost completed for another wildcat venture which is on the southwest corner of the E. E. Householder 371 acres, in the northwest quarter of Section 12, and over a half mile northeast of the Weiss farm well of the Sun Co., and a mile directly north from the Saginaw Prospecting Co.'s No. 4 well just north of the corporate limits of Saginaw.

The boiler has been placed for the well of the Superior Oil Co. on the John Spatz property, at Weiss and Hermansau streets. The derrick and other parts of the rig for the well have been shipped from Paintsville, Ky., while casing and other supplies also are on the way. Smith Fannin and Rod Duty, two Kentucky drillers, have arrived at Saginaw to drill the Superior Co.'s well.

A group of Saginaw people composed of A. F. Myer, Howard E. Patterson, Russell G. Patterson, Dugald E. Wilson, and Claude Tromley of Detroit, have planned to drill a well on a plot of land on North Washington Avenue, a short distance north of the Central foundry. The well will be drilled by Contractor Edward Stewart and work must start within 30 days.

Recent Lease Records

Leases on 1,345 acres of land in Bridgeport Township, Saginaw County, were filed with the register of deeds by Howard F. Patterson, comprising 24 leases in Bridgeport Township, also two other leases, one on 60 acres in Frankenmuth

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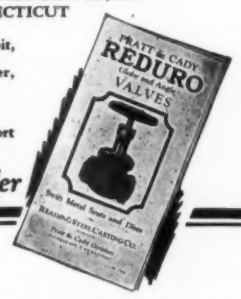

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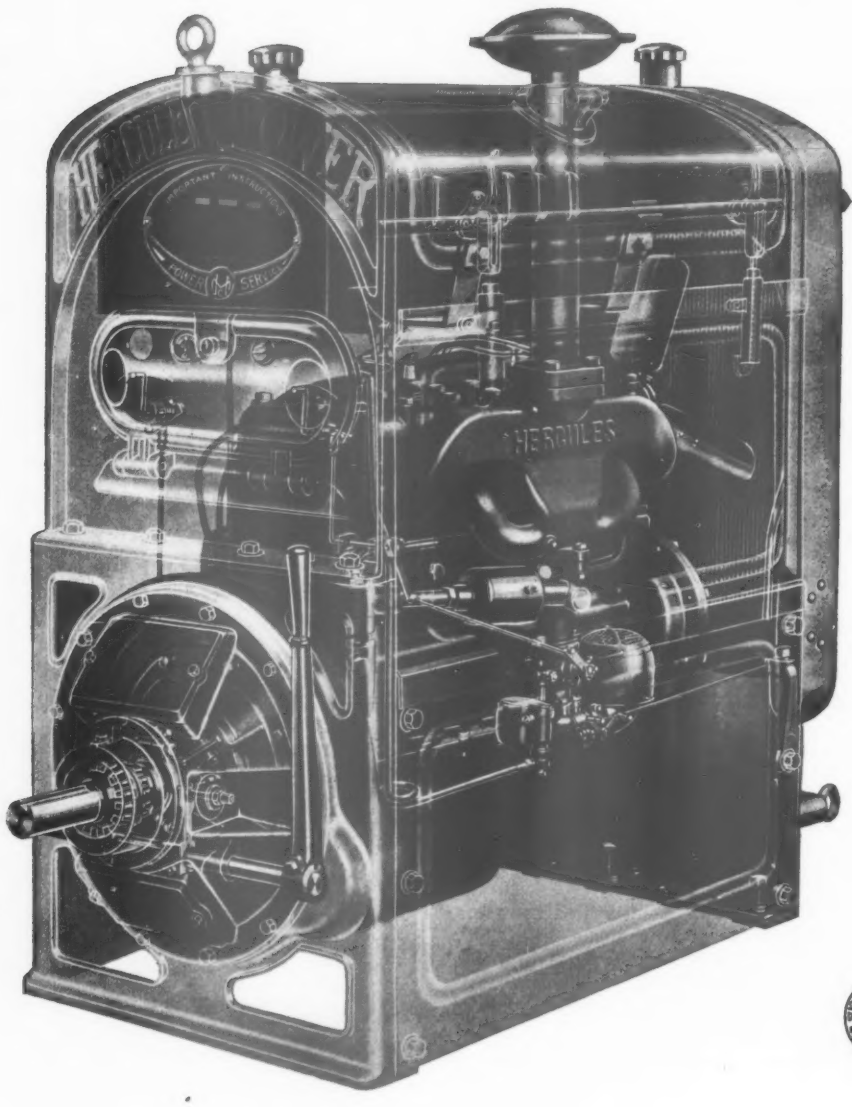

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Township, and one on 17 acres of land in the twenty-first ward of Saginaw.

A. H. Russell, who is planning the drilling of three tests in the Saginaw Field, filed a lease on 60 acres of the farm of Edward Shields that adjoins the Marshall farm to the north and in Section 16, where the Vorhees well is drilling.

The Sun Oil Co. of Toledo, Ohio, filed five leases. Three are on 110 acres, in Saginaw Township, while the other two are on 180 acres in Kockville Township. Charles R. Phillips filed one lease on 14 acres in Saginaw Township.

A. J. Weideman, a well known operator of Newark, Ohio, filed a lease on 1½ acres in the Deindorfer addition, and one of 10 acres in Saginaw and Carrollton Township, close to production.

Three leases were recorded in the name of George H. Sinclair, Edwin R. Loudin and J. J. Bowman of Canton, Ohio. They include 12 acres in Carrollton and Zilwaukee Townships, and two leases of 176 acres in Zilwaukee Township.

The Gardner Petroleum Co. of Tulsa, Okla., filed a lease on 80 acres in Zilwaukee Township, while four leases were recorded in the name of George Ewing, trustee. Three of the Ewing leases are on 115 acres in Kockville Township, while the other is on 10 acres in Saginaw Township.

The Boston-Southwestern Oil & Gas Co. of Paintsville, Ky., now operating in various parts of the Lima Field of northwestern Ohio, has entered the Saginaw Field, and secured a lease on 40 acres in Bridgeport Township, Saginaw County. This company only entered the Lima Field a couple of years ago, but has drilled a large number of wells in various parts of the Trenton Rock Field and is now running tools in the Roundhead Field of Hardin County, Ohio.

S. E. Borts of Ludington, Mich., recorded a 20-acre lease in Thomas Township. Stewart C. Sanderson of St. Charles, Mich., filed two leases. One is on 78 acres in Brant Township, and another is for 160 acres in both Brant and St. Charles Townships.

CANADIAN FIELDS

(Continued from Page 54)

feet if possible, the casing immediately following the drill where caving formations are penetrated.

Belgo-Canadian Oil Co.'s No. 1, Section 4-19-2w5, has finished overhauling and strengthening the old Record derrick and has a boiler in position and machinery on the ground. The crew will start fishing for the lost tools at 4,327 feet and expects to spend up to five weeks cleaning out the hole before drilling deeper. A diamond drill will be carried to the 5,500-foot level, and production is looked for around 5,000 feet. As soon as the fishing job is finished, No. 2 will be spudded in and No. 3 will be rigged up as soon as No. 1 gets production. A rotary outfit is being secured, and two tests will be drilled simultaneously. All three tests will be drilled to 5,000 feet or more if necessary. The company has applied for a permit for a 12-inch pipe line to the nearest shipping point at High River.

Madison Oils, Ltd., which has a test in production at 1,758 feet in the Montana Fields, is working on a cellar for No. 2 test in the Turner Valley. Machinery is being hauled to the site. British Dominion Oil Co.'s No. 1, LSD 4, Section 5-20-2w5, has finished its derrick and camp buildings. Anaconda Oil Co., incorporated under Dominion charter with $500,000 capitalization, has been organized with head office at Calgary and has spotted a test in the Turner Valley near the Advance wells in Section 20-19-2w5. The company will also develop acreage in Montana. Officers are: President, H. D. Clough, Duluth, Minn; vice president, F. D. Beveridge; secretary-treasurer, J. B. Patterson; managing director, George H. Cloakey; directors, W. C. Wood, Hugh J. Duffield, E. J. Young, all of Calgary.

Calmont Oils, Ltd., is putting up a derrick in LSD 2, Section 1-20-3w5, just south of the old Indiana-Alberta producer. A 114-foot derrick for either standard or rotary tools is being used, and the company plans to try out the use of the spiral stem, which is an innovation in the Turner Valley drilling. The company is capitalized at $1,000,000, with head office at Calgary; officers are, president, A. G. Clarke; vice president and managing director, J. C. Dallas; directors, Dr. L. A. Maxwell, G. W. Myers and G. W. Morgan; secretary, C. P. McIntosh, C. A.

Seneca Oils, Ltd., organized under Dominion charter with $500,000 capitalization and head office at Calgary, has located its No. 1 test in LSD 1, Section 34-20 3w5. Officers of the company are, president, G. H. Cloakey, Sr.; vice president, Patrick Treanor; secretary, J. G. Edgar; directors, R. J. Hutchings, Frederick Stapells.

Bush Petroleum Corp., capitalized at $1,500,000, has been organized by British Columbia interests headed by O. B. Bush and has located No. 1 test in LSD 1, Section 11-20-3w5.

New Valley Oil Co. is rigging up a test in LSD 4, Section 6-21-2w5.

In the Jumping Pound district and adjacent areas, heavy filings have been made by Alberta Pacific Consolidated, Ltd., Dallas Oil Co. and Calmont Oil Co. Sections 3, 4, 9, 10, 15, 16, 21 and 24, Township 24-6w5, were blanketed.

In the Moose Mountain district, Reserve Oil Co., drilling on the Morley Indian Reserve, is below 260 feet, after setting the big casing at 102 feet. Signal Hill's No. 1, LSD 9, Section 34-23-5w5, is shut down at 2,025 feet waiting for 6¼-inch casing. Signal Hill's No. 2, same section, is working on derrick.

In the Turner Valley Field, the Co-operative Oil Service, Ltd., has a location in LSD 8, Section 1-20-3w5, south of the McLeod wells. Aladdin Oil Co. has located a test in LSD 3, Section 34-19-3w5. New York-Alberta Oils, Ltd., is rigging up a test in LSD 6, Section 20-19-2w5. New Black Diamond No. 1, LSD 1, Section 3-20-3w5, has a derrick up. New McDougall Segur Oil Co., NW Section 12-20-3w5, has derrick up. Cooper-Nanton No. 1, LSD 2, Section 7-20-2w5, is rigging up.

Pass Oils, Ltd., has been organized with $500,000 capitalization and head office at Lethbridge, Alta., to drill on Montana and Alberta acreage. Officers are: President, G. F. Bletcher, Lethbridge; vice president, H. Rossenberry, Pincher Creek; directors, L. L. Morgan, Blairmore; R. J. Baldry, Coaldale; secretary-treasurer and managing director, C. L. Dodge, Lethbridge.

In east central Alberta, the Irma Oil Development Co.'s well, LSD 16, Section 28-45-9w4, being completed with a rotary outfit by Edmonton Wainwright Oils, Ltd., has apparently got a good commercial gas production at the unusually shallow depth of 1,025 feet. The test was started originally by a group of Irma men to test the area close to that town. After working through a hard shale capping, the drill found a 5-foot gas sand, similar to that encountered in the Maple Leaf No. 1 at about 1,775 feet. The well will be finished at this horizon, and the gas probably piped to Irma; a second test being undertaken which will go deeper for oil. So far this is the shallowest production yet secured in the Viking-Irma-Wainwright areas.

In the Wainwright area, Emerald Oils, Ltd., LSD 8, Section 30-45-6w4, rotary test, made 200 feet in the first day's drilling and is now reported around 700 feet. They are running triple tower, with Pat Adams, H. C. Adams and C. P. Dellinger in charge. British-Wainright Oil Co.'s No. 1, LSD 12, Section 20-45-6w4, is reported rigging up. Anglo-Alberta Oil Co., LSD 16, Section 19-45-6w4 is working on derrick. Dave Credille, who has left the Edmonton-Wainwright Oils, Ltd., will have charge of this test, and is now in Texas arranging for shipment of three more rotary outfits to Alberta. The Anglo-Alberta location is 200 yards from British Petroleums 3-B and 300 yards from Edmon-

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ton Wainwright No. 1 producers. Western Consolidated Oil Co.'s No. 2, Section 30-45-6w4, is reported rigged up ready to spud in. Jack Cruse has arrived from Texas to take charge of the drilling. Work is being resumed on Western Consolidated No. 1, LSD 8, Section 20-45-6w4. This test encountered trouble last summer through the casing being frozen at 1,400 feet. A rotary outfit is being brought in for the deeper drilling.

Invincible Oils, Ltd., has secured a site in the SE Section 11-45-6w4, just west of Wainwright, and will build a cracking plant to handle Wainwright crude. The first unit, of 1,000 bbls. capacity, is to be in operation in 90 days. Just north of the plant, on the NE Section 11-45-6w4, the company has spotted location for a drilling test.

Wainwright Petroleums, Ltd., LSD 6, Section 30-45-6w4, is reported moving derrick timbers to the site and working on camp buildings. A heavy duty rotary outfit is being brought from the south for this test. James Carrington has arrived from the Texas fields to take charge of the Edmonton-Wainwright Oils No. 2 test at Irma. Bethlehem Oil & Refineries, Ltd., of Calgary, is moving two rotary outfits to the Wainwright Field. The company is planning a series of six tests, of which one will be carried to 4,000 feet as a deep test of the Wainwright Field. Baxter-Wainwright Oils, Ltd., has located two tests. No. 1 is in LSD 14, Section 20-35-6w4, 200 yards southeast of British Petroleum's No. 3-B, while No. 2 is just north, in Section 29-45-6w4. The company expects to drill 2,260 feet.

East of the Wainwright Field, on the Ribstone - Blackfoot anticline. Gordon Beattie, acting for the Ribstone Petroleum Syndicate, has blanketed a block 5 miles square, comprising 15,000 acres. The area is in Township 43-3w4, and No. 1 well has been located in Section 10. The filings are on the southern end of the Ribstone-Blackfoot structure mapped by Dr. G. S. Hume; and production is anticipated between 1,600 and 1,700 feet. A string of tools is being brought in for No. 1 test, which will start drilling by August 1. The location is 4 miles southwest of Ribstone on the Canadian National main line. On the north end of the structure gas has been struck at 290 feet near Oxville, while south of Ribstone artesian water wells show gas indications; but no commercial development has previously been undertaken on this structure.

Canalta Oils, Ltd., of Calgary, and Lloydminster Oil & Gas Development Co., of Lloydminster, Sask., are also entering this field. The former has tentative locations for two tests in LSD 3 and 6, Section 14-47-1w4. The Lloydminster company intends to drill 17 miles south of Lloydminster for gas to supply that town; it holds approximately 7,000 acres in Townships 46, 47 and 49, Range 1w4. Oil Producers Corp. of Canada, which has production in Montana, is planning to bring over two drilling outfits to test the Ribstone structure.

In the Jumping Pound area, 25 miles west of Calgary, Imperial Oil, Ltd.'s No. 1 Bow River, LSD 15, Section 12-25-5w5, is reported drilling at 2,370 feet. In the Willow Creek Field, west of Nanton, in the southern foothills, Imperial Oil, Ltd.'s Rice Creek test is drilling at 4,260 feet. Royalite Oil Co.'s No. 5, Section 7-20-2w5, in the Turner Valley, is fishing for lost tools at 3,105 feet.

In the Border Field east of Coutts, Imperial Oil, Ltd.'s Erickson Coulee, LSD 13, Section 8-1-12w4, is drilling at 1,346 feet. In the Bow Island Field, Imperial Oil, Ltd., is building its camp in Section 8-11-11w4, where a deep test for oil will be drilled under arrangement with the Canadian Western Natural Gas Co. A standard outfit will be used.

In the Medicine Hat gas field, the Roth Syndicate's deep test is reported drilling below 3,800 feet. Water was shut off at 3,784 feet and the tools are now drilling in a dry hole.

In the Foremost Field United Oils, Ltd.'s deep test near Foremost is reported close to the gas horizon at 2,025 feet. The crew is cementing 6¼-inch casing and will resume drilling as soon as the cement sets. Two slight shows of gas were encountered in the upper horizons.

Near Sweetgrass, the Monalta Oils, Ltd., test on the Montana side is drilling at 1,840 feet, with a show of gas; as soon as solid formation is reached the 10-inch casing will be set. On the Quarantine Reserve close to Coutts, Urban Oils, Ltd., Section 4-1-15w4, is drilling at 2,792 feet.

In northern Alberta the Western Provinces Oil Co. is getting ready to resume work on the Victory well, close to Peace River town. This test has been drilled to 1,542 feet with 10-inch casing within 50 feet of the bottom, and has encountered several shows of oil and gas.

In Saskatchewan, Unity Valley Oil Co. is constructing derrick and camp in SE Section 23-41-24w3, and is moving tools and machinery from Vera station.

In the Ontario Fields, in Zone Township, Kent County, Colchester Oil & Gas Co.'s deep test north of Thamesville has been shot in the Trenton limestone, but the results cannot be determined till the hole is cleaned out.

In the Petrolia Field, Lambton County, a little shallow drilling is being done by W. J. Hussey. A test drilled to 465 feet on the J. Barbour farm, concession 8, and Brooke townline, pumped 10 bbls. in three hours; and on being deepened to 485 feet the oil rose 140 feet in the hole. It will be a fair pumper. The outfit has been moved to the Smallman property, and the Barbour well put on the pump. Ab Telsey has added a new pumping outfit to his plant near Petrolia.

In Nova Scotia, commercial development of the torbanite and oil shale deposits in Pictou County is being undertaken by Oil & Nitrate Products, Ltd. The shale property consists of a block of 12 square miles adjacent to the town of New Glasgow.

N. LOUISIANA-ARKANSAS

(Continued from Page 48)

at 1,532 feet. Hardtner Oil Co.'s No. 4 Urania, Section 8-10-2e, is making 200 bbls. naturally from sand at 1,516-19 feet. Louisiana Oil Refining Corp.'s No. 4-B Tremont, Section 30-10-2e, is flowing 200 bbls. daily from sand at 1,551-55 feet. Montague Oil Co.'s No. 1 Zenoria Lumber Co., Section 11-9-1e, is still flowing 300 bbls. of fluid, 40 per cent oil, from sand at 1,494 to 1,505 feet. Natural Gas & Fuel Corp.'s No. 6-B Urania, Section 18-10-2e, is making 150 bbls. naturally from 7 feet of sand topped at 1,512 feet. Ohio Oil Co.'s No. 7 Urania, Section 16-10-2e, was put on the beam and is making 100 bbls. at 1,513-17 feet. Sherman and associates' No. 3 Russell, Section 25-10-1e, is pumping 120 bbls. from 1,554-56 feet. H. R. Smith's No. 1 Hardtner, Section 22-10-2e, was dry and abandoned in gray shale at 1,624 feet. Harris and associates' No. 1 W. O. W., Section 25-10-1e, formerly Youngblood and associates' No. 1, is an abandoned location.

Urania Drilling

Urania's rapid drilling campaign continues to ease off, however, 10 first reports for the field being made. Abercrombie Oil Co.'s No. 2 King, 660 feet south and 150 feet east, NW SE SW, Section 25-10-1e, is a derrick; 6-inch casing was cemented at 1,503 feet at No. 7 M. M. King, Arizola Petroleum Co.'s No. 6 Tannehill, Section 36-10-1e, is waiting for a standard rig at 1,450 feet; No. 8 is drilling at 1,350 feet. Ayers and associates' No. 1 Miller, SW cor. SE, Section 31-11-2e, is drilling at 500 feet. The cement plug at 1,507 feet is being drilled out at Carter & Hurley's No. 1-B Urania, Section 7-10-2e. Cherokee Petroleum Co.'s No. 2 Louisiana Central, Section 19-11-3e, is drilling at 1,200 feet. Six-inch casing was cemented at 1,513 feet at Hardtner Oil Co.'s No. 5 Urania, Section 7-10-2e. Hunt and associates' No. 12 Tullos Heirs, Section 26-10-1e, is drilling at 500 feet. No. 13 Tullos Heirs is a rig. Hunt McCurry & Zoder's

No. 2 Urania, Section 7-10-2e, is drilling at 1,400 feet.

Keene & Woolf's No. 4 Urania, Section 19-10-2e, is waiting for 6-inch casing to set at 1,523 feet. Louisiana Oil Refining Corp.'s No. 7-A Tremont, Section 4-9-2e, is coring shale at 1,409 feet; Louisiana's No. 8-A Tremont, Section 35-10-1e, is setting surface casing at 103 feet. A derrick is standing for Louisiana's No. 5-B Tremont, 150 feet south and west NE cor. Section 25-10-1e. Six-inch was cemented at 1,524 feet at Louisiana's No. 32-B Tremont, Section 25-10-1e. Love and associates' No. 4 Zimmerman, 660 feet north and 100 feet west SE NE SW, Section 25-10-1e, is drilling below the 900-foot level. Minnesota Oil Corp.'s No. 1 J. M. Cotton, Section 25-9-2e, is shut down at 1,879 feet.

A derrick pattern is on location for Montague Oil Co.'s No. 2 Zenoria Lumber, 700 feet south, 200 feet west NE NW NW, Section 11-9-1e. Natural Gas & Fuel Corp.'s No. 5-B Urania, Section 18-10-2e, was dry in sand at 1,524-30 feet and is shut down for orders. No. 7-B Urania is being bailed to test sand at 1,515-17 feet. Six and five-eighths inch casing was cemented at 1,503 feet at No. 8-B and at 1,510 feet at No. 9-B. Natural's No. 3-E Urania, Section 18-10-2e, is waiting for casing to set at 1,506 feet. Surface casing was set at 106 feet at No. 4-E and No. 5-E Urania, 550 feet south and 218 feet east, center Section 18-10-2e, is a derrick, as is No. 7-E Urania, 220 feet east and 169 feet north SW NW SE, Section 18-10-2e. No. 1-F Urania, 125 feet north and 96 feet west SE cor. Section 24-10-1e, is a location. Shreveport Oil Corp.'s No. 1 Urania, Section 8-10-2e, cored sandy shale at 1,488 feet. Six-inch casing was cemented at 1,511 feet at O. F. Whittaker's No. 4 King, Section 36-10-1e.

Bossier Parish

In the Bellevue Field, No-Bo Fuel Syndicate's No. 1 Weaver & Rivers, Section 13-20-12, was dry at 501 feet and was abandoned. Arkansas Fuel Oil Co.'s No. 1 Murray, Section 14-23-14, is ready to resume drilling at 3,466 feet. Doern and associates' No. 1 Bollinger, Section 9-22-11, is shut down at 1,670 feet. Six-inch casing was cemented at 2,702 feet at Woodley & Collins' No. 1 L. & A. Oil Co., Section 14-23-12, and a derrick is up for the same operators' No. 1 Antria, SE cor. Section 4-21-11. Autrey and associates' No. 2-C Smith, Section 23-19-11, is drilling at 335 feet. R. L. Crook's No. 4 Larkin, Section 14-19-11, is drilling in lime rock at 400 feet.

Caddo Parish

One deep sand completion and several small producers along with a sprinkling of failures were recorded in Caddo during the week. The Gulf Refining Co.'s No. 17 Lane, Section 13-21-15, was completed at 3,782 feet, making 5,000,000 feet of gas, 15 bbls. of oil and 750 bbls. of salt water. H. J. Bussa's No. 1 Hardeman, Section 24-22-15, was junked and abandoned at 1,053 feet. W. D. Chew's No. 3 State, Section 34-21-16, is pumping 45 bbls. daily from 1,845 feet, corrected depth. Lewis Oil Corp.'s No. 14 D. H. Raines, Section 22-21-15, is making 7 bbls. daily on the pump from 1,583 feet, steel line measurement. Magnolia Petroleum Co.'s No. 15 Doan Thigpen, Section 5-20-15, is a hole full of water at 2,222 feet and has been abandoned. Oil City Oil Co.'s No. 2 Satterwhite, Section 10-20-16, was dry and abandoned at 2,304 feet. S. L. Rickett's No. 12 Caddo L. B., Section 23-22-15, is making 20 bbls. on the pump from 1,076 feet. The Texas Company's No. 4 Mason fee, Section 33-21-16, is a 35-bbl. pumper at 1,869 feet. Tholl Oil Co.'s No. 8 Huckaby, Section 14-21-15, was the best of the group when it was completed at 1,610 feet for a 90-bbl. pumper.

A derrick is up for W. D. Chew's No. 4 State, 3,330 feet south and 250 feet east, NW NW, Section 34-21-16, and Chew's No. 1 Caddo Levee Board, Section 9-20-16, is spudding. Six-inch casing was set at 1,810 feet at Chew's No. 4 fee, 2,310 feet south and 1,700 feet west NE cor. Section 33-21-16. Dixie Oil Co.'s No. 1 Jolly, Section 27-22-15, is drilling at 4,088 feet; Dixie's No. 16 Muslow, Section 7-20-15, is waiting for 6-inch to set at 2,148 feet. Twelve and one-half inch casing was set at 200 feet and Dixie's No. 76 Robertshaw, Section 14-21-15, is drilling ahead at 1,500 feet. Surface casing was set at 90 feet at Gilliam Syndicate's No. 2 Sellington, NE NW NW, Section 20-21-14. Galloway and associates' No. 1 Burglass, Section 15-21-16, is drilling at 2,200 feet. Gulf Refining Co.'s No. 1 Byrd, Section 2-19-14, is drilling in gumbo at 1,260 feet. On the Gulf's Ferry Lake lease, No. 233, Section 16-20-16, is waiting for a standard rig at 2,283 feet; No. 234, Section 15-20-16, is being bailed to test at 2,283 feet; No. 235, same section, is drilling in blue shale at 2,100 feet; No. 236, Section 16-20-16, is going through chalk rock at 1,475 feet; 6-inch casing was cemented at 2,150 feet at No. 237, Section 16; No. 238, Section 21, is drilling at 235 feet; No. 239 is rigged and ready to go; No. 240, Section 15, is a derrick as is No. 241, Section 15; a derrick is being built for No. 242, Section 16, and locations have been made for No. 243 Ferry Lake, 1,620 feet north and 300 feet east SW cor. Section 15-20-16, and No. 244 Ferry Lake, 2,870 feet north and 944 feet west SE cor. Section 16. Gulf's No. 1-E Muslow, Section 35-21-15, is drilling through hard gray lime at 3,721 feet. Drillers are finding it difficult to kill off the 41,000,000-foot gas flow at Gulf's No. 12 Tyson, Section 14-21-15.

Drilling Operations

Lewis Oil Corp.'s No. 15 D. H. Raines, Section 22-21-15, is drilling at 200 feet. Magonlia Petroleum Co.'s No. 16 Dillon, Section 24-21-15, is drilling through sand and rock at 1,785 feet; No. 17 Dillon is going through gumbo at 2,025 feet. Magnolia's No. 1 Spell, Section 29-21-15, is drilling through hard lime at 3,067 feet and Magnolia's No. 1 Wiley Bradford, Section 24-21-15, is coring lime at 3,604 feet. Magnolia's No. 22 Raines, Section 22-21-15, is to be put on the pump in the chalk rock at 1,665 feet. Ohio Oil Co.'s No. 1 J. S. Ardis, Section 1-21-15, is fishing for nine joints of the drilling stem and a rock bit at 4,656 feet. Page & Caldwell's No. 1 Hobbs, Section 29-21-15, is drilling at 2,240 feet. Standard Oil Co.'s No. 1 Bettie S. Youree, Section 13-20-15, is waiting for the 6-inch casing to set at 2,209 feet. D. C. Richardson's No. 13 Youree-Randolph, Section 13-20-15, is being put on the pump at 2,269 feet.

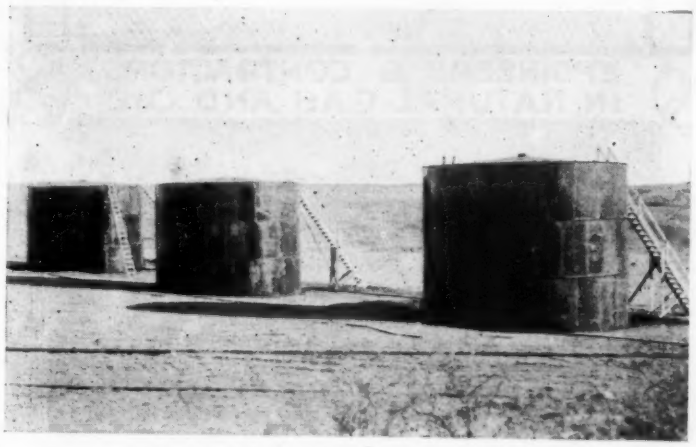
The Texas Company's No. 42 C. M. L. Co., Section 23-21-15, is waiting for the 6-inch to set at 3,660 feet; No. 62 Caddo L. B., 1,890 feet south and 980 feet west NE cor. Section 33-21-16, is drilling at 895 feet; No. 63 Caddo L. B., 750 feet north and 200 feet west SE cor. SW, Section 14-21-16, is a derrick; No. 2-B Jeems Bayou, Section 16-20-16, cored sand and shale bearing oil at 2,200-07 feet; No. 52 S. P. Harrell, Section 12-2--16, is shut down at 1,978 feet waiting for orders; No. 53 S. P. Harrell is rigged up and ready to start drilling; 5 3/16-inch casing was cemented at 1,475 feet at No. 7 J. K. Herold, Section 14-21-15; location has been made 1,100 feet north and 986 feet west SE cor. SW, Section 3-20-16, for No. 1 Mrs. V. Perry, and No. 18 D. H. Raines, Section 15-21-15, is being bailed to test chalk rock at 1,700 feet. Tholl Oil Co.'s No. 9 Huckaby, Section 14-21-15, is a derrick. A rig is up 1,200 feet west and 627 feet north SE cor. Section 15-20-15, for Victor Wenzel's No. 1 Hunsicker. Six-inch casing was cemented at 1,908 feet at Woodley Petroleum Co.'s No. 2 Knight, Section 35-16-12, and the test tested salt water at 1,559 feet.

Caldwell Parish

Cherokee Petroleum Co.'s No. 1 Louisiana Central, Section 10-11-2e, is drilling at 1,325 feet. The plug is expected to be drilled at Chal Daniel's No. 1 Lively, Section 6-12-4e, near Long Lake, in a few days.

Claiborne Parish

Brown and associates' No. 1 Beard, Section 28-19-5, is drilling through shale and boulders at 1,560 feet. Gilliland Oil Co. and W. R. Ramsey's No. 1-D Taylor, Section 14-23-8, drilled out the plug at 3,106 feet and bailed the casing dry. Tri-



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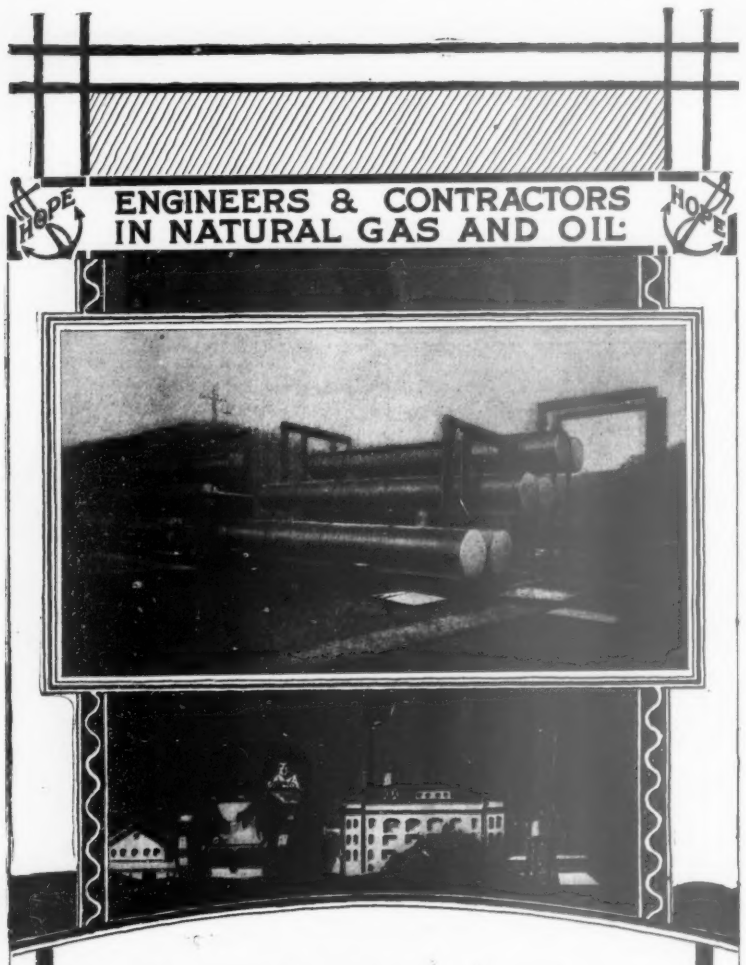

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angle Drilling Co.'s No. 1 Hollayfield, Section 32-23-5, is drilling in lime at 2,450 feet, and Triangle's No. 1 Keen, Section 7-19-5, is drilling ahead in lime at 4,162 feet.

DeSoto Parish

DeSoto Parish's single completion was the wildcat failure of L. V. Ulrey's No. 1 Heard, Section 18-12-12, which was dry and abandoned at 2,666 feet. J. P. Evans' No. 1 L. L. & D. Co., Section 15-12-14, is drilling ahead at 2,200 feet. Six-inch casing was cemented at 2,750 feet at Evans' No. 1 Sutherlin, Section 20-12-14. Magnolia's No. 1 Bond, Section 27-12-11, is drilling in hard lime at 2,948 feet. Ohio's No. 1 Cody, Section 34-12-16, is drilling in hard lime at 2,936 feet. A. H. Tarver's No. 4 Matthews, Section 29-12-11, is drilling at 2,500 feet.

Grant Parish

Another Caldwell-Angelina flexure failure was chalked up when Humble Oil & Refining Co.'s No. 3 L. & A., Section 3-9-2w, hit the ocean at 1,517 feet. Bradley and Cozart's No. 1 Holmes, Section 16-19-1e, is drilling at 1,200 feet. Finn and associates' No. 5 Ball and Cody, Section 13-8-1w, is drilling through rock at 2,294 feet. Finn and Hurdley's No. 1 Ball, Section 32-7-1w, is drilling through packed sand at 1,780 feet. Gulf Refining Co.'s No. 1 Swope, Section 18-9-1e, cored white sand at 1,864-74 feet. Humble's No. 2 L. & A., is coring at 1,436 feet, and No. 4 L. & A., Section 6-9-1w, is a derrick.

Monroe District

Four new wells in the Monroe Gas Field added 20,000,000 feet of gas to the open flow capacity of that huge field. The largest well was McKenzie and associates' No. 1 McKenzie, Section 6-19-5e, which is producing 12,000,000 feet of gas from 2,156 feet. J. M. Huber's No. 2 Edwards, Section 1-18-4e, made 2,000,000 feet from the gas rock at 2,235 feet. G. E. Jordan's No. 1 Ouachita, Section 17-18-4e, was finished at 2,231 feet for a 3,000,000-foot well. Pioneer Oil & Gas Co.'s No. 1 Nolan, Section 17-18-4e, is making 2,500,000 feet of gas at 2,232 feet.

Drilling operations in the Monroe Field continue to climb steadily and a dozen operations were in progress there the latter part of the week. Feazel's No. 1 Archer, Section 22-20-4e, is drilling ahead at 660 feet. Twelve and one-half-inch casing was set at 189 feet at Central Co.'s No. 1 Kerr, Section 12-9-4. J. M. Huber's No. 3 Banks, Section 36-19-4e, is rigged up and ready to go. Sam D. Hunter's No. 1 D'Arbone, Section 32-19-3e, is being completed at 2,215 feet. Maury Drilling Co.'s No. 3 McErwin, Section 20-19-4e, blew out at 1,290 feet and efforts are being made to kill the blowout. Palmer Corp.'s No. 3 fee, Section 24-19-4e, is drilling at 1,480 feet. Six-inch casing was cemented at 2,147 feet at Palmer Corp.'s No. 1 Milsap, Section 36-20-4e, and Palmer Corp.'s No. 2 Milsap, Section 25-20-4e, is a derrick. United Carbon Co.'s No. 2 Wilson, Section 24-20-4e, is being bailed to test at 2,210 feet. Southern Carbon Co.'s No. 48 fee, Section 35-19-4e, is drilling at 1,750 feet. Southern Carbon Co.'s No. 5 Grayling, Section 21-21-4e, is a rig, and No. 2-B Grayling, Section 32-21-4e, is drilling at 420 feet.

Webster Parish

The cement plug at 2,530 feet is being drilled out at Alabama Petroleum Co.'s No. 4-B Robbins, Section 21-21-10. A new derrick is being built 100 feet west of Humble Oil & Refining Co.'s No. 1 Cox, Section 22-21-10, which was junked at 4,214 feet. Magnolia Petroleum Co.'s No. 1 Turner, Section 21-21-10, is in 5 feet of sand topped at 2,540 feet, has 1,000 feet of oil in the hole and is waiting for a standard rig. Magnolia's No. 2 Turner, same section, is drilling below the 950-foot level. Ohio Oil Co.'s No. 1 Cox, Section 23-21-10, is more than a mile deep and is drilling ahead in brown shale at 5,304 feet. Ohio Oil Co.'s No. 3 Holloway, Section 23-21-10, is going through lime at 3,522 feet. A rig is up and Ohio Oil Co.'s No. 7 Sidney heirs, Section 16-21-10, is ready to start drilling. Smitherman and McDonald's No. 1 Oakley, Section 29-33-11, is going ahead slowly through gumbo at 4,130 feet. Arrangements are being made to set casing at 3,347 feet at Southern Crude Oil Purchasing Co. and W. R. Ramsey's No. 1 Munn, Section 1-22-10.

Winn Parish

Humble's No. 1 William Edenborn, Section 1-9-3w, cored salt water at 1,466 feet and is taking another core at 1,494 feet. Hunt and associates' No. 1 Edenborn, Section 8-9-3w, is drilling at 250 feet. Keene and Woolf's No. 1 Radesecich, Section 21-12-3w, is drilling through rock at 1,001 feet.

Scattered Wildcats

In Jackson Parish, El Dorado Chief Oil Co.'s No. 1 Rodgers' Section 8-14-3w, is drilling at 1,050 feet, and a derrick is up for Clarence Houseman's No. 1 Horton, SE SE NW, Section 34-15-3w. Arkansas Fuel Oil Co.'s No. 1 Cooper, Section 3-20-4w, Lincoln Parish, is spudding. Bannon and associates' No. 1 Yerger, Section 51-16-14e, Madison Parish, is a rig. In Natchitoches Parish, Forrest, trustee,'s No. 1 Ayers, Section 3-13-7, is drilling at 100 feet. J. F. Palmer's No. 1 Edenborn, Section 4-11-6, is drilling in rock at 1,800 feet. Alden Oil Co.'s Red River Parish test, No. 1 Powell, Section 13-11-10, has spudded. Carnahan and Kyle's No. 1 Hollingsworth, Section 24-12-11, is drilling in chalk rock at 1,319 feet. L. M. Emlet's Sabine Parish test, No. 1 Bowman, Section 9-7-12, is drilling through hard lime and shale at 3,860 feet, and Emlet's No. 7 Bowman, Section 14-7-14, is shut down at 1,260 feet. J. B. Greer's No. 1 Peavy-Wilson, Section 24-5-9w, is drilling at 1,600 feet. In Union Parish, Arkansas Fuel Oil Co.'s No. 1 Jams Reeves, Section 14-20-1e, is drilling in sandy lime at 3,485 feet.

KANSAS FIELDS

(Continued from Page 44)

SW, Section 23-31-10, Chautauqua County, drilled deeper, is making 150 bbls. a day from sand at 1,603-20 feet.

Gordon, Statz & Wind's No. 1 Stillwell, C NE NE NE, Section 24-20-10, Lyon County, was dry and abandoned at 2,285 feet.

The Transcontinental Oil Co.'s No. 3 Atyeo, SW cor. SE SW SW, Section 30-21-10, got sand at 2,152-79 feet. It was given two small shots and made 125 bbls. the first 24 hours. The Transcontinental Oil Co.'s No. 1-A Atyeo, C NW NE NW, Section 31-21-10, made 200 bbls. following a 60-quart shot in sand at 2,134-66 feet. and its No. 2 Atyeo, C SE SW NW, Section 31-21-10, started at 150 bbls. after a 100-quart shot at 2,121-43 feet. Greenland Oil Co. and Phillips Petroleum Co.'s No. 1 Butler, C NW SW NW, Section 35-21-12, was dry and abandoned at 1,958 feet.

Haviland and others' No. 1, C SE NE NE, Section 7-20-13, Greenwood County, was dry and abandoned at 1,837 feet.

1,000-Bbl. Well

The Syndicate Oil Co.'s No. 1 Fuller, C NE SW SW, Section 1-22-10, Greenwood County, started at 1,008 bbls. the first 24 hours from sand at 1,967-2,036 feet. The Empire Gas & Fuel Co.'s No. 7, C NW SE NW, Section 6-22-10, started at 535 bbls. a day on the swab after a 130-quart shot in sand at 2,244-68 feet. The Theta Oil Co.'s No. 9, C NE NE NW, Section 9-22-10, was dry and abandoned at 2,870 feet. The Prairie Oil & Gas Co.'s No. 3 Austin, C NE SW NW, Section 12-22-10, was shot with 180 quarts in sand at 2,085-2,130 feet and started at 100 bbls. a day. The Skelly Oil Co.'s No. 2 Prather, C NW NW SE, Section 20-22-10, was a 90-bbl. initial producer from sand at 2,242-84 feet, shot with 80 quarts of explosive. The Texas Company's No. 8, C SW NE SW, Section 29-22-10, made 50 bbls. the first day after an 80-quart shot at 2,360-81 feet. The Empire Gas & Fuel Co.'s No. 5 Prather, C NW NE SE, Section 15-22-11, was shot with 80 quarts in sand at 1,850-89 feet and made 65 bbls. of oil and 20 bbls. of water the first 24 hours; Mid-Continent Petroleum Corp.'s No. 1 Fankhauser, C NE SE SW, Section 4-22-12, was shot with 40 quarts in sand at 1,842-53 feet and made a 65-bbl. well; Simmons and others' No. 7 Fankhauser, C

SW NW SE, Section 4-22-12, sand at 1,800-34 feet, shot with 150 quarts, 400 bbls.; Simmons and The Texas Company's No. 2 Fankhauser, C SE NE SW, Section 4-22-12, sand at 1,802-44 feet, shot with 160 quarts, 210 bbls. Same operators' No. 3 Fankhauser, C NW NE SW, Section 4-22-12, sand at 1,808-23 feet, shot with 60 quarts, 30 bbls. The Texas Company's No. 1 Fankhauser, C NW NW NE, Section 4-22-12, sand at 1,853-93 feet, shot with 100 quarts, 45 bbls. Simmons and the Amerada Petroleum Corp.'s No. 2 Ellis, C NE NE SW, Section 26-23-11, sand at 1,909-36 feet, shot with 120 quarts, 90 bbls.

The Texas Company's No. 1 Gibson, C SW NE NW, Section 3-28-6, drilling at 820 feet.

Cowley and Chautauqua

In Cowley County the Arkansas Fuel Co's No. 1 Wilson, SW cor. SE SW, Section 35-31-3, is a rig.

In Chautauqua County, the Theta Oil Co.'s No. 1 Murphy, CEL W half NE, Section 27-31-10, drilling at 1,350 feet (old well drilling deeper.) Prairie Oil & Gas Co.'s No. 1 Townsend, NE cor. NW SE, Section 20-34-9, spudded.

Lyon New Activities

Markham & Horrigan's No. 1, C NW NW SE, Section 27-18-11, Lyon County, was drilling below 600 feet. The Leeward Petroleum Co. was rigged up on No. 1 Morris, C SW SW NE, Section 9-19-12. The Double A Oil Co. was rigged up to drill No. 1, C NW NW NE, Section 8-19-13. J. W. Reed and others have a rig up for No. 1 Graham, C NE NE SE, Section 19-19-13. Sheedy and others have spudded No. 1, C NE NE SW, Section 19-21-10, Lyon County; Theta Oil Co.'s No. 2 Jones, C SE SW NW, Section 30-21-10, a rig; same company's No. 3 Jones, C SE SE NW, Section 30, a rig; Transcontinental Oil Co.'s No. 4, C NW SE SW, Section 30-21-10, drilling below 1,795 feet; No. 5, C NW NE SW, Section 30, drilling at 1,890 feet; same company's No. 6 Atyeo, C SW SW SW, Section 30-21-10, rig on the ground; No. 8 Atyeo, C NE NW SW, Section 30, rig up; No. 9 Atyeo, C NE NE SW, Section 30, rig up; Sheedy and others' No. 8 Atyeo, C NE NW SW, Section 31-21-10, drilling below 700 feet; No. 9, C NE NE SW, Section 31, spudded; No. 10, C SE NE SW, Section 31, rig; Transcontinental Oil Co.'s No. 4 Atyeo, C SE SW NW, Section 31-21-10, drilling at 350 feet. No. 6 Atyeo, C NE NW NW, Section 31, rig.

In the Pixley District

R. Day has spudded No. 2 Fuller, SW SE SE, Section 1-22-10, Greenwood County. The Manhattan Oil Co.'s No. 1 Fuller, C SE NE SW, Section 1-22-10, rig; Empire Gas & Fuel Co.'s No. 8 Atyeo, C SE SE NW, Section 6-22-10, drilling at 400 feet; Kansan Oil Co.'s No. 4 Atyeo, C SW SW NE, Section 6-22-10, drilling below 300 feet; Mid Kansas Oil & Gas Co.'s No. 5 Pixlee, C SW NW NW, Section 8-22-10, rig on the ground; Hazlett and others' DeMalone, C SW NW SE, Section 12-22-10, drilling at 510 feet; same operators' No. 19 DeMalone, C NE NW SE, Section 12-22-10, rig up; Manhattan Oil Co.'s No. 4-A DeMalone, C NE NW NE, Section 12-22-10, rigging up; Prairie Oil & Gas Co.'s No. 4 Fechter, C NW NW NW, Section 12-22-10, rig; No. 5 Fechter, C SW NW NW, Section 12-22-10, rig up; Sinclair Oil & Gas Co.'s No. 42 Browning, C SW SW, Section 20-22-10, drilling at 475 feet. Tidal Oil Co.'s No. 18 Prather, NW cor. NE SE NW, Section 29-22-10, drilling at 1,700 feet; No. 19 Prather, C NW SE NW, Section 29-22-10, drilling at 1,500 feet.

New Work in Teeter Pool

McGinnis and others' No. 3 Green, C NW SW SW, Section 11-23-9, Greenwood County, rigging up; No. 4 Green, C SW NW SW, Section 11, rig up; Roth Faurot and the Manhattan Oil Co.'s No. 8 Thrall, CEL W half Section 27-23-10, rig; same operators' No. 58 Thrall, CNL SE, Section 29-23-10, rig up; Empire Gas & Fuel Co.'s No. 13 Kipfer, C NW SE SE, Section 11-22-11, drilling at 400 feet; York State Oil Co.'s No. 10, C SW SW NW, Section 33-22-11, drilling; Simmons and others' No. 8 Fankhauser, C SE NW SE, Section 4-22-12, drilling below 400 feet. Pure Oil Co.'s No. 4 Oliver, C SE SE SE, Section 8-23-11, rig up; The Texas Co. and Simmons' No. 2 Oliver, C NE NW SE, Section 8-23-11, rig up; O. J. Connell's No. 1 Redding, C NW NE NE, Section 10-23-11, spudded; The Texas Company's No. 1, C NW NW NW, Section 16-23-11, drilling at 300 feet; Darby and others' No. 1, C NE NE NE, Section 17-23-11, drilling at 300 feet.

McGinnis and others were drilling below 440 feet on No. 4 Wiggins. C NE NW SW, Section 30-24-11, Greenwood County, drilling at 440 feet. Same operators' No. 1 Wiggins, C SE SW NW, Section 30-24-11, rig on the ground. Enterprise Oil Co.'s No. 2 Thrall, NW cor. SW, Section 7-24-12, spudding; Fisher Lauck and others' No. 1 Brookover, C SW SW SW, Section 19-25-11. Altimite Oil Co.'s No. 1 Johnson, NW cor. SW SW, Section 35-25-13, drilling at 1,040 feet.

Seely-Madison District

In Greenwood County the Empire Gas & Fuel Co. had a rig up for No. 8 Hines, C SE NE SW, Section 11-22-11. Same company has a rig on the ground for No. 8 Killeson, C NE SW NW, Section 14-22-11. The Mid-Continent Petroleum Corp. has started drilling No. 10 Cloptch, C NE SW SW, Section 18-22-11. Phillips Petroleum Co. had a rig on the ground for No. 8 Braden & Hillard, NW cor. SW, Section 33-22-11. York State Oil Co.'s No. 9 Westcott, SE cor. NW SE NW, Section 33-22-11, drilling at 400 feet; same company's No. 10 Westcott, C SW SW NW, Section 33-22-11, rigging up; Mississippi Valley Oil Co.'s No. 1, NW cor. SW NW, Section 2-22-12, was shot down at 700 feet; Empire Gas & Fuel Co.'s No. 2 Fankhauser, C NW SE NW, Section 4-22-12, spudded; Empire Gas & Fuel Co. and others' No. 3 Fankhauser, C SW SW SE, Section 4-22-12, rig up; The Texas Company and Simmons' No. 1 Fankhauser, C NW SW NE, Section 4-22-12, drilling at 340 feet. The Texas Company's No. 2 Fankhauser, C SW NW NE, Section 4-22-12, drilling at 310 feet; Phillips Petroleum Co.'s No. 1 Lewis, C NW NE SW, Section 5-22-12, spudded. C. W. Titus' No. 1 Holdeman, C NE NE NW, Section 9-22-12, tools in; Pure Oil Co.'s No. 4 Oliver, C NE SE SE, Section 8-23-11, rig up; T. K. Simmons and others' No. 4 Tiffany, C NW SW SW, Section 9-23-11, rig up; The Texas Company's No. 1 Tiffany, C NW NW NW, Section 16-23-11, rig up; Connell Oil Co.'s No. 1, C SW SW NE, Section 10-23-12, spudded. Marland Oil Co. and Christy's No. 10 Hestler, C NE SW SW, Section 23-23-13, drilling at 600 feet; the Mid-Continent Petroleum Corp.'s No. 11, C SW NE NE, Section 29-23-13, drilling at 1,485 feet.

Woodson County Drilling

Fields, Cross and others' No. 1, C NW NW SE, Section 9-25-14, Woodson County, drilling below 1,050 feet. Peerless Oil Co. and others' No. 4 Lamber, CNL NE, Section 23-26-14, drilling below 500 feet; No. 5 Lamber, NW cor. NE, Section 23-26-14, drilling below 300 feet; No. 3 Lonk, CEL NW, Section 23-26-14, machine in.

New Work in Butler

New work in Butler County includes Empire Gas & Fuel Co.'s No. 164 Wilson, C NW SW NW, Section 8-25-5, drilling below 560 feet; same company's No. 94 Chesney, CNL S half N half SW, Section 21-25-5, machine in; Reed and others' No. 1 McClure, C NE SE NE, Section 30-26-6, rig; Richmond and others' No. 1, C SE NE NW, Section 8-27-6, drilling below 550 feet; Prairie Oil & Gas Co.'s No. 1, NE cor. SE NW, Section 33-27-7, a rig; Tidal Oil Co.'s No. 34 Dickenson, C SE NW NW, Section 16-26-8, rig up; Sinclair Oil & Gas Co. and Empire Gas & Fuel Co.'s No. 16 Skaer, C SW SE NE, Section 35-27-4, rig on the ground; Sinclair Oil & Gas Co.'s No. 10 Starkey, C SW NE SE, Section 35-27-4, rig. Sandy Holl and others' No. 1 Bower, C NE NW NW, Section 21-27-5, rig on the ground.

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GULF COAST FIELDS

(Continued from Page 52)

Mirando fields increased and Lockhart (Lytton Springs) declined.

The estimated for each field is as follows:

Field—	Gross Bbls.
Luling	21,150
*Mirando	8,300
Somerset	2,050
Calliham	135
Rockdale-Minerva	970
Lockhart	5,250
Total	37,855
Grand total for week	138,315
Grand total last week	144,767
Decrease	6,452

*Includes Webb, Jim Hogg, Zapata and the Cole-Bruni section of Duval County.

Wildcats

Tyler, Angelina, Jasper, Grimes and Walker Counties are being organized by the major companies and as reports are filed acreage is leased. The region is in what is known as the "piney" woods and is heavily timbered with but few roads or trails, making some sections almost inaccessible. For this reason these counties have been rather neglected as prospective oil territory although it is not generally known that the first crude in Texas was found in a well drilled east of Rockland in 1858. In 1903 Kountz Brothers, New York investment house, drilled several wells around the vicinity of Rockland, Tyler County, one of which produced 1,500 bbls. of heavy gravity oil, which was used for fuel to drill others. One of these tests was drilled to 4,300 feet and another to 2,500 feet. The dip is from the northwest to the southeast. The land is owned in large blocks by lumber and colonization companies. The Flanigan Drilling Co. is making a test in the north end of Lufkin, Angelina County.

In Brazoria County, the Roxana Petroleum Corp.'s No. 2 Allen is below 4,000 feet. No. 1 Cooper is at 350 feet and No. 2 Clements at 105 feet.

In Fort Bend County, Gulf Co.'s No. 11 Davis at Long Point is at 940 feet. Neilan, Inc., No. 2 Fredericks is idle at 4,390 feet.

In Hardin County, the Weldon Oil Co.'s No. 1 Kountz, northeast of Batson, is idle around 1,000 feet. The Humble Oil & Refining Co.'s No. 2-A Strain is at 2,455 feet. The Pint Oil Co. is drilling No. 1 Fullbright.

In Harris County, the Seabrook Oil Co.'s No. 1 Morris is rigged. Kelly and others' No. 1 Lipper is rigging. It is near Aldine. Brane Oil Co. has a location near Spring. Kane Exploration Co.'s No. 3 Foster is at 1,540 feet. Benedum & Trees' No. 1 Kennedy is rigged to start. Claude Smith was given the contract to drill the hole. It is east of the Humble Pool.

In Jefferson County, the Houston Oil Co.'s No. 1 Pipkin Davis at Big Hill is below 2,900 feet. A location has been made for No. 2 Sun-Dyson. At Fannette Dome the Gulf Production Co.'s No. 2 Bordages is drilling around 3,325 feet and No. 7 Thomas is rigging.

New Saline Dome

A new saline dome is reported to have been located on the Liberty-Chambers County line, south of Raywood.

In Matagorda County, the Gulf Production Co.'s No. 1 Sanborn, Hawkins Dome, is drilling around 2,355 feet. No. 1 Parkinson is rigging to start. No. 4 Craig is idle at 3,300 feet.

In Newton County, the Humble Oil & Refining Co.'s No. 1 Sabine Tram is below 3,875 feet.

The formation tests drilled by J. W. Rich and Sorrelle near Mackey, Wharton County, have been standing idle for several weeks. Rich went to 1,012 feet and Sorrelle to 1,042 feet.

The Houston-Gulf Gas Co. has started No. 5 Heard in the Refugio gas field in Refugio County.

In Waller County, George Newman and others' No. 2 near Pattison is below 650 feet.

The Sun Oil Co. and Humble Oil & Refining Co. jointly are starting deep test in the Johnson Bayou region in Cameron Parish, Louisiana. The Yount-Lee Oil Co. is drilling No. 5 Hackberry and 2 Gulf Land Co. at Hackberry Dome in Cameron Parish. The company is erecting tankage on a waterway. There are no railroads in the parish which is largely a marsh, with elevations here and there on which the natives have erected homes. Southeast of Hackberry Dome, the Pure Oil Co. is drilling No. 3 at Sweet Lake, which is a deep test.

The Ville Platte Petroleum Co. is starting No. 1 Derouren in Evangeline Parish.

The number of joint tests being drilled by the major companies both in the defined pools and outside, is causing some comment. It is evident the companies wish to effect economies. The Gulf and the Humble companies are operating jointly on the Hawes lease at Boling. The Texas Co. and Vacuum Co. are drilling joint account in the Hull Pool. The Republic Prod. Co. and Houston Oil Co. have been operating jointly there on the Dolbear 800 acres since the pool opened. The Vacuum and Gulf companies are developing the Lockport (La.) district jointly. The above is only a partial list of the combined activities.

The Valley Oil Co. (Pennington and others) is rigging No. 1 Austin, Austin County.

Geophysical exploration work is being done north of Manor Lake in Brazoria County and also to the south. This region was tested out two years ago and is now being given a second test.

SOUTHWEST TEXAS

(Continued from Page 50)

cleared for No. 7, located 500 feet north of the discovery well. After six months of drilling around the north of the discovery well nothing but showings that were insufficient to make wells have been encountered. Faith of operators is weakening a little and it is not impossible that the field will never expand beyond one well.

Humble has abandoned its No. 4 Schallert on the Palangana salt dome, to the northwest, being unable to continue due to lost drill stem, and is drilling at about 500 feet in No. 8 Singer. Simms Oil Co. is drilling at 3,168 feet in No. 1 Schallert on the same salt dome.

Other wildcats in Duval County are Murchison & Fain's No. 1 Peters, fishing for slip at 250 feet. Benedum & Trees' No. 1 Southerland, standing at 848 feet while drilling for water. Duggan & Mauer changing to heavier rig at 3,045 feet on No. 1 Hoffman in Survey 123. J. T. Graham's No. 1 Beall is drilling at below 2,500 feet in northeastern Duval County; Simms Oil Co. at 1,700 feet in No. 1 Dinn, in Survey 666.

Webb County

In the Aviators Field, Webb County, the past week Associated Oil Co. completed a well in the northeast corner of the south half of Block 44 of the Bruni tracts that has extended the field three-quarters of a mile to the south and has added a lot of new territory besides carrying the proven area of the field within three-quarters of a mile of the south line of the Bruni tracts. The well will make a pumper, total depth being 1,735 feet. The Duke Phillips well, one-half mile to the west, in the northeast corner of the south half of Block 46, is not so favorable. It had a sand showing a little oil at 1,661 feet, but at 1,840 feet is still dry.

Completions of the week in the field include No. 2 Bruni, Gibson Oil Corp. of New York, on the west half of Block 13, 150 feet south of the north line, and the second location east of the west line, which swabbed and flowed 500 bbls. of oil in steel storage between 1 o'clock in the morning and 8 o'clock the morning of the same day. Swabbing will continue for a time. The well promises to be one of the best in the field. It is surrounded by production. It is the first completion of the Gibson on the north 60 acres out of the west half of Block 13, collapsed casing delaying the completion of No. 1, which will be brought in in a few days. Gibson's No.

3 has set casing and No. 4 has spudded in and is drilling and No. 5 is rigging up. Gibson will drill up the entire 60 acres at once. Murchison & Fain have spudded in on the southwest corner of the east half of Block 13, offsetting the first completion of the Ruthada Oil Co. in the northwest corner of the east half of Block 18, which is a fairly good well, but smaller than some, being estimated at around 75 bbls. No. 2 on the lease, 150 feet from the north and west lines, is down to the sand. No. 2 on the west half of Block 45, has set casing at 1,680 feet and is ready to bring in. Simms Co.'s No. 3 Bruni, in Survey 835, is drilling below 1,680 feet. O. W. Killam's No. 1 Bruni, in Block 7, Survey 835, is drilling at 2,395 feet. Crown Central has the derrick up for its second test on the south end of the east half of Block 16 of the Bruni tracts, and has completed its first test in the southwest corner of the east half of Block 16 at 1,696 feet. No. 9 Bruni, in the northeast corner of the west half of Block 43, offsetting the Wheatley well, is swabbing 400 bbls. at 1,726 feet. No. 6-A, in Block 14, is drilling at 1,200 feet. Houston-Gulf Gas Co. and Morgan are moving in tools to drill in the southwest corner of Block 12, a quarter of a mile east of nearest line of production. George Echols has started to drill in Block 68, 2 miles east of the line of production. Stroube & Stroube, of Corsicana, have the derrick up for a test in the northwest corner of Block 19, which will be a south offset to Houston-Gulf Gas and Morgan test in the southwest corner of Block 12. They also have made two locations for tests in Block 78 of the Edgington subdivision of the Puig Bros. Survey, one-half mile north. Ramsey-Maxey Oil Co. has a location made for a test in the west half of Block 42 of the Bruni tracts, next south of Block 19. Staley & Wynne are drilling in their No. 4, in the northeast corner of the west half of Block 18 and their No. 5 Bruni in the south-east corner of the same tract and also their No. 6 Bruni in the southwest corner of the south 20 acres of the west half of Block 13 next above their holdings in Block 18. They have derricks up for two other tests in Block 13 and one in Block 18. Three Rivers Oil Co. has spudded in its No. 6 Puig in Block 76 of the Edgington subdivision.

Carolina-Texas Field

Houston Gulf Gas Co.'s No. 1 Barnsley is drilling at 800 feet in Block 9, Survey 268, in the Carolina-Texas Field. Associated Oil Co.'s No. 2-A Webster, in Survey 684, is drilling at 1,900 feet. U. S. Gas & Oil Co. is preparing to resume drilling in No. 1 Benavides, which has been standing at 2,110 feet while drilling a water well. J. H. Welch is drilling at 2,000 feet in Block 12, Survey 336.

Webb County Wildcats

O. W. Killam's No. 1 Driver, in Survey 52, southwest of the Carolina-Texas Field, is drilling at 1,000 feet. W. C. Ritchison, in Survey 71, northeast of the Carolina-Texas Field, is drilling at 2,010 feet.

Zapata County

Stein and others are preparing to drill two tests in Zapata County, one of which will be in Survey No. 8 on the Schroeder land. Maurer & Duggan are moving in tools to drill No. 2 Cuellar on Survey 243 in Zapata County. Earl K. Bateman has let the contract for a test on Survey 617 and the test will be started before June 20. O'Hern & Putnam, drilling contractors, are preparing to start a 3,000-foot test for Benedum & Trees interests in Zapata County on the Casa Blanco ranch in the Gilla Grant. Magnolia Petroleum is rigging up to drill the No. 1 R. Cuellar in Survey No. 278, location being 150 feet from the north line and 2,260 feet to the east line.

Atascosa County

Plateau Oil Co. has let the contract to the Witherspoon Oil Co. to drill a well 2 miles west of Anchorage in northwest Atascosa County. The derrick is up and the rig is moving in. This location is near two tests drilled last year by the Rio Bravo Oil Co. that picked up a little Serpentine and more or less showings of oil that encouraged and seemed to warrant further tests in that area.

Bexar County

The Marland Oil Co. is preparing to drill in its No. 1 Mihalski in eastern Bexar County, 18 miles east of San Antonio on the St. Hedwig road and 1 mile north of St. Hedwig. The depth of the well is 1,712 feet where casing is set. It is about 70 feet into the Edwards and had quite a little oil that is said to have been one of the best showings, if not the best, of any wildcat in the Edwards outside of the Luling Field. Marland has practically all the acreage. Some royalties have been changing hands at as high as $200 basis for the eighth and a considerable number of oil men gathered from over the state to see the test. Some of the Luling wells are said to have drilled as far as 180 feet into the Edwards to get production.

The Utah Texas (McClure) well on the Ivan Vick farm in southern Bexar County at 2,841 feet is 41 feet, approximately, in the Edwards and has been making very slow progress due to the Edwards there being very hard and compact. W. L. McClanahan's No. 2 Sodrok at 1,426 feet tested several sands below 557 feet down to 1,426 feet but failed to get anything but a small well and the test may be carried down to the Edwards lime. He has several shallow wells at 557 feet and will continue to develop the shallow production with light rigs, the wells making about 3 bbls. each. Humble Oil & Refining Co. is drilling at about 1,000 feet in the No. 1 Yturri, a few miles south of San Antonio. Tidal Oil Co. at Adkins, about 3 or 4 miles south of the Marland well, is drilling at 1,030 feet.

Brooks County

Benedum & Trees are drilling at 2,700 feet in Brooks County on the Wormser ranch. Ballard & Underwood's No. 1 Lassiter in northeastern Brooks is rigging up for a salt dome test.

Brewster County

Green Valley Oil Co.'s No. 2 Wilson in Brewster County is shut down at 2,115 feet waiting for orders. The test was expected at 1,740 feet to pick up production found in the No. 1 Wilson where about 800 bbls. of oil was bailed out before the well was lost with a collapsed casing. The No. 2 seems to have failed to find that sand.

Fayette County

O. W. Killam's No. 2 Kroether in Fayette County failed to get production in the Edwards lime in a location a few miles north of Schulenberg and the rig is moving south to a new location on the opposite side of the river.

Guadalupe County

John W. Hooser is rigging up for a test on the Fulcher land north of the Luling Field in Guadalupe County. Pat Armstrong is drilling at 1,248 feet in No. 1 Jarvis Dale northwest of Kingsbury. J. M. Davis at 1,680 feet is presumably leaving the Austin chalk in No. 1 Julius Schultze. Payne & Bond have topped the Edwards at 2,040 feet in No. 1 H. Rosebrock 2 miles south of the Davis test in western Guadalupe County.

LaSalle County

DeLange, Eiser Development Co.'s No. 1 Dobie (fee), which found considerable gas at 480 feet a week ago has set 12½-inch casing and will test to see if there is enough to run a boiler. If so a hole drilled to 450 feet for water but dry will be carried down and a gas well developed and No. 1 resume drilling for deep test.

Live Oak County

George B. Pickett is drilling at 1,150 feet in the hard rock that caps the Fayette formation in the No. 3 West at Kitty in Live Oak County.

Medina County

Ina Oil Co. tested No. 1 Hoffman, a wildcat well in Medina County a few miles south of Hondo, the county seat, at 828 feet and has been disappointed in the showing. The well had 20 feet or more of good coarse sand saturated with oil. It is believed the production was mudded off. The liner has been pulled and the well will be washed again and

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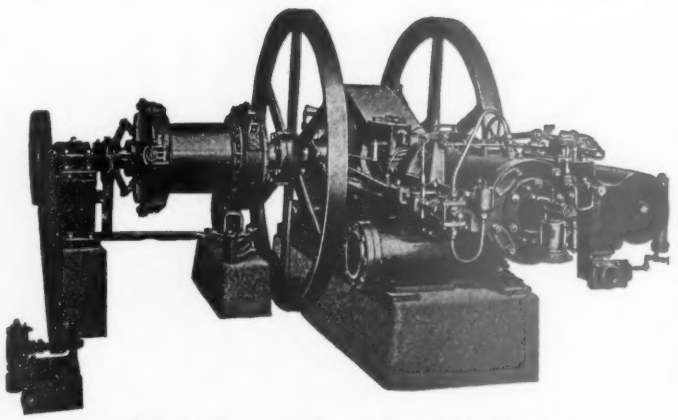

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bailed with the hole open. The Ina Oil Co.'s No. 1 Finger, a few miles farther west is drilling at 350 feet. Henderson & Holden set casing in their No. 3 Adams a mile south of the Ina oil field and were preparing to drill. The well was showing a little gas but had shown no oil. Nos. 1 and 2 were gas wells making 10,000,000 and 13,000,000 feet, respectively, at a depth of 903 and 905 feet. Eastham & Tarver's No. 1 Howard on Survey 91, a little to the east of Henderson & Holden, is drilling below 1,000 feet and seems to have passed the level where Henderson & Holden got gas without finding and sand. Medina Oil Co., which drilled No. 1 Taylor to 356 feet, 4 miles south of Hondo and got a well that pumped 100 bbls. of oil per day for some time and has since drilled several tests around it without getting anything except small production in two wells, is preparing to drill three other tests at intervals of 300 feet to the southwest of No. 1 Taylor. Medina Oil Co.'s No. 1 Haglan is shut down at 700 feet. Golden West's No. 1 Odom is being deepened at 510 feet. Yantis' No. 1 Haglan, drilling at 600 feet; Al Buchanan's No. 1 Odom, fishing at 360 feet. Kittle & Townley have abandoned No. 2 Richter at about 1,000 feet and have the derrick up and are moving in to drill on the Bendele in Survey 593. Plateau Oil Co. has abandoned at 2,150 feet the No. 1 Carle on the Harrison Survey in southwestern Medina County at 100 feet in the Edwards lime which was dry of everything. North & South has derrick timbers on the ground south of Hondo and a little north of the Taylor wells of the Medina Oil Co., for a deep test. Alamo Drilling & Leasing Co. has spudded in on the Louis Graff farm in Survey 20, a couple of miles north of the Ina Field for a shallow test in expectation of picking up Serpentine. The rig at the conclusion of this test will be moved to the Kennedy ranch in western Medina a half mile south of the Sabinal road and 1 mile east of the Uvalde County line for an Edwards lime test. Schermerhorn Oil Co. has started its second test in Survey 31 in Medina County a little southeast of Noonan where it completed one well to 800 feet that is making a few barrels on the pump. Cecil Switzer at 1,700 feet in No. 1 Zerr northwest of Hondo is drilling in the top of the Glenrose. Gibson Oil Corp. at 1,340 feet has abandoned its No. 1 Faesler in Medina in Survey 808 southwest of the Ina Field. Golden West is rigging up for the Joseph Courand in eastern Medina north of Noonan. H. W. Ward is rigging up for a test for production in the Serpentine west of La-Coste.

OKLAHOMA FIELDS

(Continued from Page 44)

from sand at 3,134-41 feet, the oil slightly cut. O. M. Ireland's No. 1, SE cor. SW NW, Section 11-17-10, 7,000,000-foot gas well in sand at 1,523-50 feet; Ted Lilystrand's No. 1-A, SE cor. SW SE, Section 11-17-10, which made 20 bbls. a day naturally from sand at 1,915-42 feet was shot with 90 quarts and started at 30 bbls. a day, with a slight b.s. content. Brocker & Warren's No. 1-A, CWL NW SW, Section 24-17-10, was shot with 70 quarts in sand at 1,809-47 feet, made 120 bbls. the first 24 hours, the oil cutting slightly; J. H. Wright's No. 10 Dawson, got sand at 1,875 feet and was drilled to 1,910 feet, started at 40 bbls. after a shot. H. C. Wilson's No. 1 Bucktrot, C SE SW SW, Section 26-17-10, is a 3,000,000-foot gas well at 2,308-40 feet. It was drilled to 3,057 feet and plugged back.

New Work in Creek

Considerable new work was started in Creek County in the past week. Mann & Bartlett's No. 2 Maxey, CWL SW NE, Section 5-19-8, will be drilled with a machine; Burlingame & Sharp's No. 6 Peters, SE cor. SW NW, Section 13-19-8, rigged up; Sand Springs Home's No. 25, C NW NW, Section 4-18-7, drilling at 400 feet; Shaffer Oil & Refining Co.'s No. 7 Brinton, C E half NE SW, Section 6-18-7, drilling below 1,400 feet; Selby Oil & Gas Co.'s No. 2 Barnett, C SE NW, Section 31-19-9, a rig; M. P. Evans' No. 1 Ruth Taylor, NE cor. NW, Section 22-18-9, drilling at 585 feet (location in the NE cor. of Section 22 abandoned); J. A. Hull's No. 1 Sarnie Sier, NE cor. Section 29-18-9, rig; Sparks and others' No. 1, NW cor. NE SE, Section 8-18-10, spudded in and shut down; Bu Vi Bar Oil Co.'s No. 5 Watson, SE cor. SW NW, Section 11-17-8, rig; Savoy Oil Co.'s No. 5 Johnson, C NW SE, Section 22-17-8, drilling below 925 feet; Black Gold Oil Co.'s No. 2, NW cor. SW NE, Section 5-16-8, rig up and tools in; T. B. Slick's No. 1 Charlie Wind, SW cor. NW, Section 10-16-8, drilling below 800 feet; Peters Petroleum Corp.'s No. 3 Arsayles, NE cor. SE NE, Section 21-16-8, drilling below 625 feet.

In the Kelleyville district, Township 17-10, the following new work is reported; Easter Oil Co.'s No. 1 Sallie Baker, C NW NW, Section 23-17-10, drilling at 800 feet; Kirchner and others' No. 1-A, SW cor. SE NE, Section 23-17-10, drilling below 1,850 feet; R. R. Kirchner's No. 2-A, CSL NE SE, Section 23-17-10, drilling below 2,000 feet; J. H. Wright's No. 13 Dawson, NW cor. SE SW, Section 24-17-10, rig; same operator's No. 8 T. Tahkaney, NE cor. SE SE NW, Section 24-17-10, drilling below 2,375 feet; same operator's No. 9 C. Tahkaney, NW cor. SE SE, Section 24-17-10, rig and tools; Nowata Oil & Refining Co.'s No. 1-A Tiger, NW cor. NE NE, Section 26-17-10, drilling at 800 feet. The Shaffer Oil & Refining Co. was drilling below 1,000 feet in No. 1 Wornorkee, NE cor. SW NE, Section 12-16-10.

Pawnee County Completions

Completions and near completions in Pawnee County reported in the past week were as follows: Magnolia Petroleum Co.'s No. 10, NW cor. SW NW, Section 4-22-3e, Otoe district, sand at 4,037-72 feet, 236 bbls. naturally; Tidal Oil Co.'s No. 10, CEL NW NW, Section 21-20-7, Jennings district, sand at 2,618-24 feet, 70 bbls. naturally, 1-10 of 1 per cent sediment. Selby Oil Co.'s No. 7, CWL NE SE, Section 23-20-8, 32 bbls. naturally and 45 bbls. the first day after a 10-quart shot; Schoenfeldt and others' No. 1, NE cor. NE SW, Section 9-20-9, abandoned at 1,210 feet; Devonian Oil Co.'s No. 1 Dobson, SE cor. NW, Section 35-22-6, got sand at 2,960-70 feet and was swabbing 40 bbls. a day, not a completion.

Pawnee County Drilling

New work started and first reports on drilling wells in the county include J. E. Donahoe's No. 1 Breen, SW cor. NE NW SE NW, Section 27-23-4, a rig; Magnolia Petroleum Co.'s No. 2 S. R. Fox, NE cor. SE SE, Section 32-20-5, a rig; Marland Oil Co. and the Mid-Continent Petroleum Corp.'s No. 1 Conover, SW cor. NE, Section 33-20-5, timbers; same operators' No. 1 Fuss, NE cor. SW, Section 33-20-5, rig; George Baker's No. 1, SE cor. NE, Section 3-20-6, drilling at 450 feet; Magnolia Petroleum Co.'s No. 3, NW cor. SE NE, Section 17-20-6, drilling at 780 feet; Prairie Oil & Gas Co.'s No. 2, NE cor. Section 23-20-7, rigged up; Selby Oil Co.'s No. 8 Van Ewan, SW cor. SE NW SE, Section 23-20-8, timbers; Bu Vi Bar Oil Co.'s No. 1 Redd, NW cor. SE, Section 26-22-2, rig on the ground.

Payne County Completions

The Shaffer Oil & Refining Co.'s No. 4, SE cor. NW NW NE, Section 26-18-3, Deep Rock Pool, Payne County, got sand at 3,788-93 feet and started as a 10,500,000-foot gas well with 60 bbls. a day of oil; Deep Rock Oil Co.'s No. 2, C NE NE NE, Section 27-18-3, sand at 4,312-52 feet, swabbed 20 bbls. of oil and 35 bbls. of water at 4,350 feet, plugged back to 4,345 feet; Twin State Oil Co.'s No. 2, NW cor. SE NW, Section 14-19-5, Yale district, sand at 2,748-62 feet, shot with 30 quarts, 40 bbls the first 24 hours; Producers & Refiners Corp.'s No. 2-A, C SE SE SW, Section 7-18-5, North Cushing district, sand at 2,830-50 feet, showed 20 bbls. production, total depth 2,880 feet, not completed.

Payne County Drilling

The M. T. C. Oil Co.'s No. 4 Waltman, C SW NE NW, Section 26-18-3, drilling at 2,520 feet; Magnolia Petroleum Co.'s

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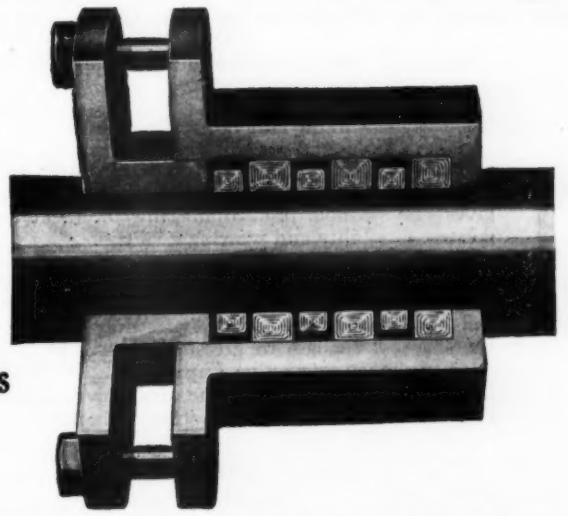

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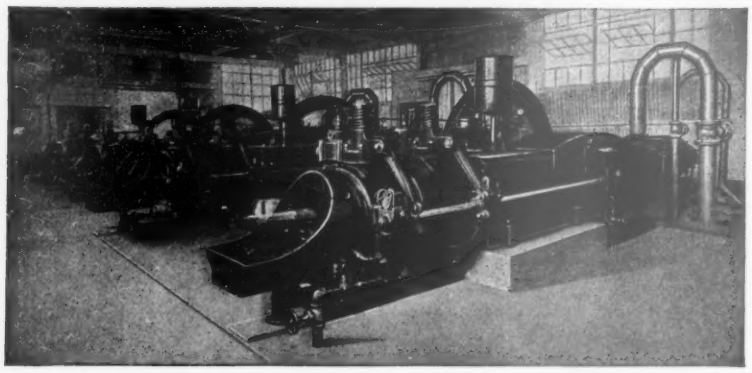

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No. 1 Pritchett, NE cor. SW SW, Section 8-19-5, a rig; Roxana Petroleum Corp.'s No. 1 Scott, SW cor. NE NW, Section 31-17-4, a rig; Mid-Continent Petroleum Corp.'s No. 1 Balfour, NW cor. SW, Section 3-19-3, a rig.

Lincoln County

The Devonian Oil Co. has definitely abandoned its No. 1 Gregg, NW cor. Section 1-14-5, Lincoln County, at 3,477 feet and its No. 2, C SW NW NW, Section 1-14-5, at 3,492 feet. No. 1 Gregg had a dry sand at 3,368-84 feet. No. 2 had a dry sand at 3,412-42 feet. The sand was penetrated in the early part of May. The location for No. 3, C NW SW NW, Section 1, has been abandoned . NW, Section 1, has been abandoned. The Amerada Petroleum Corp.'s No. 1 Gorgan, SE cor. SW, Section 16-13-5, is being rigged up.

In Tulsa County

About 6 miles south of Bixby in Tulsa County, J. S. Cotes got a 220-bbl. well in the Glenn sand in No. 5, SE cor. NE NE, Section 13-16-13. The sand lay at 1,477 to 1,484 feet, with oil from 1,482 feet.

Carter County

In the Brock Field, Carter County, the Amerada Petroleum Corp.'s No. 27 Baptiste, NW cor. SE NE, Section 20-5s-1e, was making 60 bbls. a day from sand at 1,380-1,412 feet, not a completion. The same company's No. 14 Westheimer & Daube was good for 30 bbls. a day at 1,278 to 1,283 feet, not a completion. The Amerada Petroleum Corp. was drilling at 200 feet in No. 28 Baptiste, NE cor. NW NW SE, Section 20-5s-1e.

Miscellaneous Operations

In Grady County Stodgner and others have a rig up for No. 3, SE cor. NW SW NW, Section 23-5n-8w. J. B. Nichols has a 50,000,000-foot gas well in No. 2 Reed, C NW SW SE, Section 35-5n-8w, in sand at 2,191-2,376 feet. English & Jacobs have a rig up for No. 4 Williams, NE cor. SE SE, Section 31-6n-8w. Prairie Oil & Gas Co. was rigging up rotary for No. 3, C N half NW NE, Section 3-4n-8w. The Magnolia Petroleum Co. cemented 8-inch at 1,849 feet in No. 1, C NW SW, Section 14-4n-8w.

In Caddo County the Gorton Trust's No. 4, C SE SW, Section 12-5n-9w, pumping 55 bbls. a day from broken sand at 1,860 to 2,400 feet.

The Texas Pacific Coal & Oil Co.'s No. 1 Christner, C NW NW SW, Section 5-1n-1e, Murray County, has been abandoned at 3,456 feet. It was reported dry some time ago. It had no oil or gas showings at any depth.

The Magnolia Petroleum Co. has a rig on the ground for No. 1 Barnes, NW cor. NE, Section 10-3n11w, Caddo County. The Garvin Drilling Co. was rigging up cable tools for No. 1 Stevens, C NW NW NW, Section 2-4n-11w.

The Carter Oil Co. and Knox's No. 7, NE cor. NW NE NW, Section 2-2n-5w, is pumping 55 bbls. from sand at 1,466-75 and 1,481-87 feet. Fred Phillips was rigging up machine to drill No. 1 Morris, SE cor. SW SE SW, Section 22-2n-4w, Garvin County.

Miscellaneous Developments

The Pender Producing Co.'s No. 1 Gray, C W half SE SE, Section 12-9s-1e, Love County, was abandoned as dry at 3,578 feet. There was broken sand at 750 feet, broken lime at 2,525 feet, but no showing of oil or gas. This test was located 5 miles north of the Red River.

In Texas County, in the Oklahoma Panhandle, the Valerius Oil & Gas Co.'s No. 1, NW cor. SW, Section 18-3-12, was drilling in hard sand at 1,448 feet; same company's No. 2, SE cor. SE, Section 32-5-12, drilling at 2,775 feet in sand; H. F. Wilcox's No. 1 Zea, SW cor. SE, Section 28-3-13, drilling at 2,775 feet in sand; same operator's No. 1 Hovey, SE cor. Section 21-4-14, fishing, total depth 3,032 feet; Foster-Reiter & Bramm's No. 1, Section 9-3-15, drilling below 1,320 feet; Nichols & Hitch in Township 1, Range 12, have derrick up, the derrick being on the Texas side of the line. Allison, Garber & Pulse in Section 4-1-12 lost the bit at 1,000 feet. The section, township and range given above are all based on the Cimarron meridian, applicable to the Panhandle counties of Texas, Beaver and Cimarron only.

ROCKY MOUNTAIN FIELDS

(Continued from Page 54)

feet, and one on Section 23-40-79, that will make 10 bbls. at 1,525 feet.

The Salt Creek Consolidated Oil Co. drilled a second Wall Creek sand well on Section 11-39-79, at 2,220 feet and has a small producer.

The Continental Oil Co. has made a contract with J. H. Huber & Co. of New York by which the Continental Oil Co. will sell its gas in the Lance Creek Field to the Huber Company and the latter will place a carbon black plant at Manville to operate on the gas.

Montana Operations

On Section 27-35-2, in the Sunburst Field of Montana, O'Neil Brothers drilled in a well of gusher size that started off at 1,500 bbls. at 1,480 feet. It is on the Lashbaugh lease that has produced some big wells. The well came in in a freakish way. When the sand was reached, it looked like a duster and a shot was put off to see if it would help, nothing happened and a second charge was set off, still the well was dry. The tools were sent down and after drilling only a foot or two, the well suddenly started to spout and it is a question whether the drill opened a new stratum of pay sand or whether the well hole was close to the oil and the pressure broke into the shot hole.

The Homestake Exploration Co. drilled in another gusher on Section 36-35-2, finding the pay at 1,478 feet. This well flowed at the rate of 1,800 bbls. from the Ellis sand.

The California Co., drilling a test in the west end of the Cat Creek Field, has abandoned the well as a duster after

(Continued on Page 136)

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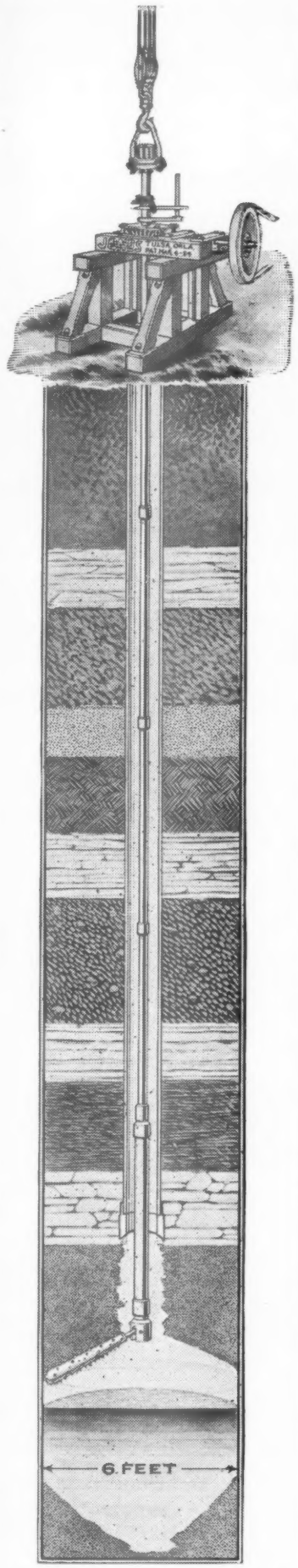

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CHICAGO BUYING IS FAIRLY GOOD BUT SOME STORAGE IS FULL

By J. B. Waldo

CHICAGO, June 5.—While there has been a steady demand for gasoline during the week, the volume of business has not been up to the expectations of the local sellers. Takings by jobbers on contracts are stated to be good in most instances, although a few have asked that shipments be delayed as their storage was full. The spot buying has been fairly good, the start of the week being better than at the close. There are various reasons for this condition and probably the chief is that the jobbers prepared in advance for the replenishment of their tanks after the Memorial Day demand. This holiday demand was large but it had been prepared for and the cool weather that has prevailed over much of the territory has doubtless restricted the use of cars to some extent. In only a few instances do the distributers state that their business was not larger than last year. In one case where the gallonage fell slightly short, the statement was made that the decrease in business with this concern was due to increased competition from new stations, the total business of the locality bulking very large but being divided among more stations than last year.

Some of the larger jobbers as well as the small dealers state that they are and have been bothered by slow shipments. One of the larger Mid-Continent refiners has been in the market for 100 cars of gasoline to supplement its own output. Quite a number of jobbers were unable to secure shipment of cars ordered and wanted for the last week-end and fearing they might fall short came into the market and picked up cars in transit. The receipt of the delayed cars has supplied their present needs in such cases.

Sales Running Ahead

So far as the writer can estimate the sales during May ran from 15 to 20 per cent ahead of last year for the same month. The Memorial Day gallonage was good. The number of cars seen in all parts of the country on the highways and byways was very large. Oil men who visited the northern parts of the territory state there were many cars on the roads far away from the cities where their license plates indicated they originated and the experience of motorists who came back to the city Monday afternoon showed the local cars were out in force as the jam was very great and it took them hours to negotiate distances that they usually would make in 15 to 30 minutes. So the trade feels that the consumption was large and that buying will have to begin shortly on a larger scale. June is a month that usually shows a greater demand for motor fuel as the month progresses and the Fourth of July is always, with any sort of favoring weather, a banner day for station sales.

The price for Navy gasoline has been held with some firmness at 12 cents the week through although at times there have been some sales between marketers at some concessions and occasionally jobbers stated they had been able to buy at something less the usual quotation for small lots being 11⅞ cents for Navy. The refinery mentioned that was in the market for quite an amount stated the best it had been able to do was 11¾ cents in its own cars. One large northwestern jobber with a reputation of buying as closely as any one reported that an order for 50 cars of Navy gasoline had been placed at 11¾ cents for prompt shipment. He also stated that he did not get the gasoline from a Chicago seller but bought direct from a Mid-Continent refiner. So far as could be learned from inquiries of the larger local sellers, none had quoted under 12 cents on this order. The feeling is that the price of 12 cents is a fair price under present conditions and that it is not a matter of price that is holding back the business or that lower prices would not make any material addition to the sales. Warmer weather is promised for the next few days and it is hoped that the temperature of 50-52 degrees which has prevailed nights and mornings is gone for a season, perhaps for the summer. At any rate schools will be closed in a couple of weeks and this always increases the touring and the consumption of gasoline.

The demand has been very large for the regular 58-60 U. S. Motor grade. There has been less call for the lower gravities and very little sale for the higher gravities. These latter are being offered in increasing quantities at very low prices largely from north Texas where there is a very earnest desire shown to move stocks. They have not been getting the export demand they hoped for and this leaves them without their customary outlet for the higher or export grades. Some have called the state of mind of some of these refiners as "panicky" judging from the insistence shown for orders and the declining quotations. The spread between the quoted prices on U. S. Motors and the higher tests is as narrow as it has been known to be for a long time in this market. The local exporting houses are practically out of the market right now although it is intimated they may be in again shortly but the refiners would like better evidence of the demand in the shape of orders. January and April exports of gasoline were very large and if the demand is a quarterly one, the next period of buying is about due.

Price Situation

None of the larger local distributors has advanced their station prices as the result of the action of The Texas Company in advancing its prices here on Tuesday. Standard Oil Co. of Indiana, Sinclair, Roxana and the strictly local distributors are still naming 19 cents as the tankwagon price with a deduction of 1 cent for dumps of 100 gallons or over, and 21 cents as the station price. The Texas Company make a flat tankwagon price of 19 cents and a station price of 22 cents which to all intents is 1 cent higher than the prices quoted by the others for either tankwagon or station sales. The trade is wondering if this extra price can be held by The Texas Company. The others do not have to change their prices, at least there is not the insistence that there would be if the price were 1 cent lower instead of higher. The general sentiment is that if The Texas Company can stand it the rest of them are willing they shall have the benefit of the higher prices. The local office still claims that it does not know how much of the territory covered by The Texas Company, is involved in the price advance. It simply attends to the Chicago district and has no information, at least to give out, as to what is being done in the remainder of the territory. There is one thing that is noticeable and that is The Texas Company has an active station building plan on and many new stations bearing the Lone Star emblem are to be seen.

A good many of the jobbers in the surrounding territory are still rather anxious as to the final result of the change in its specifications by The Texas Company, but the advance in price makes it easier for them to meet the competition. Motorists who have used the new product are not at all agreed as to its merits and some claim that if the best results are to be had the carburetor must be adjusted to give a much leaner mixture otherwise the mileage is not so good. The Barnsdall Refineries, Inc., is now marketing a new gasoline which is guar-

(Continued on Page 118)

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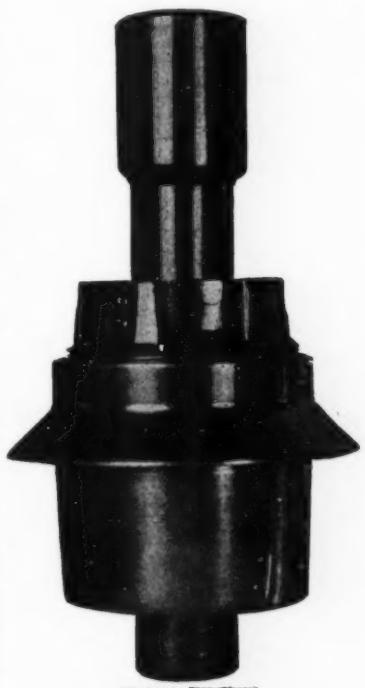

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For sale, offset acreage and other leases. Deep wells now drilling. Address Box 4454, Miami, Fla.

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T. F. Bray and associates from Arkansas are now drilling a deep test well for oil and gas located on the Monticello Dome in Jefferson County, Flordia. Send for structural and drainage map; also geological report.
Geology by Dr. S. T. Wisby of Little Rock, Ark. We desire to hear from all of those who are interested in purchasing leases and royalties around this well.
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Box 127 Monticello, Fla.

FOR QUICK ACTION will lease whole or part of 140 acres near Weleetka, Okfuskee County, Oklahoma; surrounded by some of the best oil structures in the State. Dr. E. J. Angle, 407 Funke Bldg., Lincoln, Nebr.

HAVE BUYERS for flush or settled production in Oklahoma and North Texas. Vern R. Hartman, P. O. Box 442, Dallas, Tex.

FOR SALE—Leases, production and royalties in Barren County, Kentucky. Shallow drilling, high gravity oil, long life wells. Have some leases adjoining production. Small rentals. L. W. Preston, Glasgow, Ky.

YOU have your organization and can give good service. Does the Billion Dollar Petroleum Industry know it? Have you made it easy for oil men to order from you? If not, the surest and best way to promote the merits of your company is to use The Oil and Gas Journal—the oldest and best petroleum publication in the world.

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Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.
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FOR SALE—167-acre lease, 9 wells on pump; good equipment; one-eighth royalty; 630 feet first, 864 feet second, and 915 feet third sands. All wells in first sand. Price for quick sale, $6,000. If interested write J. R. Cline, Iola, Kans.

FOLKS: All you who have made money in oil and want more, you who have lost and want to get even, everyone wanting a supreme investment and quick action. Listen: I have 40-acre lease offsetting the South Putnam Pool discovery 40 for which The Texas Company offered $225,000 after third well came in with 80 bbls. at 600 feet. Shall drill immediately, $5,000 partnership, $100 units, 10 days to complete well after drill in place; usual production in first well should enable sale for $100,000. Possibly biggest little investment in oil history, full particulars for the asking, unlimited references, wonderful run for money, square deal to all. Better wire if you want in on this. E. L. Stratton, 1604 F. & M. Bldg., Fort Worth, Tex.

WOULD like to hear from parties wishing to invest in Oklahoma. Wildcat leases and royalties. W. H. Adams & Co., 203 Clinton Bldg., Tulsa, Okla.

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HARTLEY COUNTY leases. M. F. Beaumont, Hartley, Texas.

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FOR SALE—Undivided 1/64th royalty interests in wells drilling and to be drilled in Shackelford and Callahan Counties, Tex. One hundred sixty acres checkerboarded. Bottom hole money and placed in bank until wells finished. Good geology. Good titles. Form 88 leases. Depth 1,500 feet. Price $187.50 each interest. One or more. Allen Buell, Jr., Grace Hotel, Abilene, Tex. References, Citizens National Bank, Abilene, Tex.

TEXAS PANHANDLE

Royalties in large or small units to suit any size buyer in fastest growing and most rapid developing oil field in middle west. Write for list of offerings. B. O. Taylor, 306 Blackburn Bldg., Amarillo, Tex.

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WE ARE in the market for line pipe, casing, junk pipe, scrap iron, sucker rods, pull rods, thread protectors, surplus stocks or iron and steel, machinery and oil well supplies.
Abandoned wells, abandoned pipe lines, leases, gasoline plants, refineries, industrial plants for dismantling or salvaging purposes.
Quick action on any offerings.
WESTERN PIPE AND TUBE CO.
Phone 2-3798
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FOR SALE—EQUIPMENT

FOR SALE—50 Sharples No. 6 Super-Centrifuges, 30 of which have never seen any service; motor driven; in first-class condition, at less than half of the original cost. Acme Oil Corp., 189 North Clark St., Chicago, Ill.

CRAGO CUT GEARS
Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

FOR SALE
One 5⅞x12-inch belt driven Oil Well Mud Hog pump, complete. One 50 h.p. Oil Well Oil Engine complete.
DIAMOND PIPE & SUPPLY CO.
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1-in. to 12in. Also complete drilling rigs. We are also in the market for pipe of any size or quantity.
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2001 Texas Ave., Shreveport, La.

FOR SALE—Star No. 28 drilling machine in extra good condition, tools and equipment first class shape, new cable, 700 feet 6⅝ casing, new; real bargain for quick sale. Phone or write Bonner Springs Gas Co., Bonner Springs, Kans.

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35,000 feet 2½-inch
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Two miles 60-pound first-quality relaying rails.
For immediate shipment from our Texas yards.
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FOR SALE
Fully equipped machine shop for oil country work, including buildings, 26 Bridgeford tool lathe, shaper, drill press, steam hammer, boiler, oil engine, No. 12 pipe machine, necessary cranes and small tools. Equipment new when installed at Gridley, Kan., 1923. For sale on account of ill health. For further information communicate with the Western Drill Tool & Supply Co., Chanute, Kan. Phone 480.

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FOR SALE—One 25-h.p. Reid gas engine, also one 16-foot bandwheel power, rebuilt in shop, like new, at half the cost. Call 3-3083 or 2-3447. G. W. Darling, Box 488, Tulsa, Okla.

FOR SALE
Three 27 Stars with 28-h.p. McNamara Boilers, steel in good shape. Also one 4½-inch Parkersburg machine with 28-h.p. Mounted O.W.S. Boilers. Steel from 16-inch bits to 5-inch. Will give complete list of tools on application. Mid-Egypt Gas & Oil Co., Ava, Ill.

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THIRTY-FIVE THOUSAND ACRES cutover lands in the heart of the Ozarks, suitable for fruit growing and dairying. From $3 to $4 per acre. Arkansas Land Co., Leslie, Ark.

POSITION WANTED

YOUNG MAN, 30 years old, 6 years experience in Mexico as field accountant for large oil company, desires position in South America. Thorough knowledge of oil field practices. Speaks Spanish. Best references. Box B-326, The Oil and Gas Journal, Tulsa, Okla.

RELIABLE MAN, wide acquaintance, familiar with oil well supplies, is open for position as Mid-Continent factory representative. Box B-330, The Oil and Gas Journal, Tulsa, Okla.

YOUNG MAN, age 30, at present employed as petroleum valuation engineer, desires position with large oil company in minor executive capacity offering better opportunity for advancement. University degree, specializing in petroleum geology, valuation and accounting. One year's experience producing leases, two years accounting department, two years petroleum engineer and income tax, also good business training, including law, finance, etc. Intelligent, dependable and not afraid of hard work. Box B-307, The Oil and Gas Journal, Tulsa, Okla.

CHEMICAL ENGINEER (petroleum technologist) graduate or recognized university, wishes position as chief chemist or assistant superintendent in petroleum refinery. Seven years' experience, involving work in all refinery departments. Especially trained in refining of cracked gasoline and lub oils. Excellent references. Box B-324, The Oil and Gas Journal, Tulsa, Okla.

REFINING MANAGER OR ASSISTANT

Have just completed installing very comprehensive program, in four refineries of one of largest and oldest refining organizations in U. S., for reducing process costs and increasing production. Can be available about July 1 for above position. Consulting and manufacturing experience in cutting costs, boosting yields and production, process development and assisting in financing in Mid-Continent, Atlantic Seaboard, Pennsylvania and Mexican districts. Will also consider a new project, offering sufficient participation, after careful analysis. Box B-320, The Oil and Gas Journal, Tulsa, Okla.

UNIVERSITY PROFESSOR of geology desires position on geological staff of oil company beginning June 15. Two years' experience in Mid-Continent fields. Box B-305, The Oil and Gas Journal, Tulsa, Okla.

THE ORGANIZATIONS that get the bulk of the oil industry orders are those who are known to the industry and who can combine quality with speedy service.
If you had your equipment listed in this section it would receive the same consideration that thousands are giving the good equipment advertised here.

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MAIL your advertisement now. It will be published next week. Cash with order.

HELP WANTED

OIL LEASE SCOUTS thoroughly familiar with blocking and with purchasing protection acreage. Will pay good salary, field expenses and interest to right persons with whom we make contract. Write fully, stating experience and references, also salary expected, to Box B-333, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Petroleum engineers and experienced refinery draftsmen with large oil corporation located at New Orleans. Answer giving training, practical experience, age and salary expected. Box B-317, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Mechanical draftsman, experienced in heavy machinery and general shop drawing and designing, by Oil Well Tool Manufacturing Concern. Must be high-class man and have best references. Box B-310, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Specialty salesman who is now selling to field superintendents and supply companies. We want representation in Texas. Some one needing a good fill-in line should write. We build a line of surface equipment such as powers, casingheads, stuffing boxes, beam hangers, elevators, sucker rod hooks, etc. When writing state line you are now selling. Box B-301, The Oil and Gas Journal, Tulsa, Okla.

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SEE THE WONDERLAND, sweet smelling pines; sparkling lakes; good fishing; cool nights; good water. Furnished cottages $15 and $20 per week. Lady of the Lake Resort, Park Rapids, Minn.

COLE'S POINT CAMP invites you to vacation where the air is cool and bracing. Fishing, best you can find for Muskellunge, Pike and Bass. Tulsa folks are our neighbors. Come early. Mrs. Janet MacDonald Cole, Fifield, Wis.

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Situated on Wild Horse Island, consisting of 4,200 acres in beautiful Flathead Lake. Nature's wonderland. Marvelous grouping of beauty and rugged granduer.

Enjoy Montana's summer, long pleasant days and cool, refreshing nights. No mosquitos, or other insects. Positive protection against hay fever.

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Advertisements in the Classified Wants Section are read with interest because The Oil and Gas Journal readers are always looking for a good deal. *Let them know about your product, property or service.*

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THE OIL AND GAS JOURNAL

TULSA, OKLAHOMA

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Sell stock, units or leases quickly, economically. Square shooters only need give details; 25 years' experience behind plan. Northcliff, 28 W. 44th, St., New York, N. Y.

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REAL PROPOSITION — 1,400 acres 92 per cent lease assays from test at 64 ft. are gold and silver, value per ton $50.95; will sell one-half interest to right party for money to help develop. Box 622, Tahlequah, Okla.

ORIFICE meter reading and checking for monthly statements and resettlement. Rates reasonable. Send your charts to R. L. Mosier, Okmulgee, Okla.

AN ESTABLISHED COMPANY desires to hear from parties who have patents or patentable ideas applicable to refinery construction or operation. We are in position to finance and develop and to exploit the sale and manufacture of desirable equipment or processes. Write Box B-302, The Oil and Gas Journal, Tulsa, Okla.

IT'S WORTH TRYING

During the year thousands of men use the Classified Wants Section to good advantage.

They use it to buy or sell leases, royalties, production, equipment or service of all kinds.

You can do the same thing.

Mail your advertisement now and it will be placed in next week's issue where more than 25,000 readers will have an opportunity to bid on your offering.

EXPERIENCED oil operator desires financial assistance (either company or individual) to drill several wildcat wells on large block now being assembled in Coleman, Brown, Callahan and Runnels Counties, Texas; full particulars to responsible parties; this is a real opportunity for someone wishing to become identified with a legitimate proposition; references exchanged. Box B-332, The Oil and Gas Journal, Tulsa, Okla.

WHO WANTS to drill my 40 acres in LaSalle Parish, La., Section 25, and give me half the oil? W. H. McDade, Conroe, Tex.

BUSINESS OPPORTUNITY

WABASH DRILLING CO., solicits your work. We maintain 10 strings of cable tools and will furnish estimates on work in any cable tool country. Bring on your wildcats. Wabash Drilling Co., office, Lawrenceville, Ill.

THE SMALL SUM that it costs to insert an advertisement in the Classified Section of The Oil and Gas Journal enables you to place your desires in the minds of men who are always interested in a good proposition.

DRILLING PROPOSITIONS in western Kentucky. Blocks of 1,000 to 2,500 acres given free for an offset test well. Drilling cost is small. Territory selected by experienced operators in this section. Full data given responsible companies or operators. Also settled production for sale. R. E. Cope, Bowling Green, Ky.

MINES FOR SALE—If you are looking for some valuable mining property, write me. Etienne A. Ritter, 408-9 Empire Building, Denver, Colo.

WANTED

WHO WANTS to open up an oil field near Conroe, Tex., between Humble and Mexia? W. H. McDade, Conroe, Tex.

OIL MAN, with several quick drilling deals, wants partner with money. 606½ North Ewing St., Dallas, Tex.

WE HAVE 4,000-acre block of leases, Madison County, Texas. Can show oil standing in two unfinished wells on this block. We want capital to finance well. Lowry and Kyle, Anthony Hotel, Brenham, Tex.

WILL BUY natural gas plant, up to 1,000 consumers. Box B-331, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Three or four cylinder rigs, preferably equipped with drill stem and make and break or double deck rotaries. Would like to locate Shell Goodwin, Shelly White, Frank Baquett, Jesse Reese, Puss Adams or Lew Williams. Will receive mail during June at Burkburnett, Tex., or at Box 72, Pasadena, Calif. D. O. Credille.

WANTED, HIGH GRADE OIL PROPOSITION TO FIANANCE

by party who brought out Wall Street's greatest success. J. Myron Murphy, 50 Broad St., New York City.

WANTED to get in touch immediately with responsible company that can start test well within 60 days on large tract in Florida. Have special information and report from oil expert on this acreage. Ray W. Johnson, Bartow, Fla.

WANTED — Gas for gasoline plants. Entire capital furnished. Liberal inducements to gas owners. We are pioneers in the business. Tower Gasoline Co., Mercantile Bldg., Oklahoma City, Okla.

WANTED—Producing royalties Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

ADDRESSES WANTED

PLEASE HELP ME to find my son, Everett Hampton, who on January 15 left Roswell, New Mexico, to go to Artesia. He worked for the Union Oil Co. in California before going to New Mexico. Any information concerning his whereabouts will be sincerely appreciated. Mrs. Mona Hampton, 822 Paseo St., Kansas City, Mo.

FOR SALE—DOGS

HUNDRED hunting hounds cheap. Buy early. Catalogue. Kaskaskia Kennels, Herrick, Ill.

XUM

Be Careful in the Selection of Lubricants for Your Motorized Equipment—

Passenger cars and trucks of different makes vary considerably in type and design.

Be sure that you understand: (1). The type of lubricating system used, which determines the method of feeding the oil. (2). The type of cooling system used—this factor having more or less effect on the operating temperatures of various parts of the motor.

The proper lubrication of motor equipment does not mean only the lubrication of the engine cylinders—it means the complete lubrication of all of the moving parts of the motor. Much harm can result from the use of too heavy an oil in a pressure system not designed to handle it—also where the "splash" system is used, the oil must not only flow easily, but must atomize readily so as to reach certain bearings which can be lubricated only by a fine mist.

Your passenger cars and your trucks are designed to give you many years of service—if they are properly lubricated.

Humble Motor Oils are the result of years of experience in lubricating internal combustion engines. The recommendations of Humble lubricating engineers are an added factor of safety. Whether you operate one passenger car and truck, or a whole fleet of motorized equipment, it will pay you to learn more about Humble Oils.

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BUYING FAIRLY GOOD; SOME STORAGE FULL

(Continued from Page 115)

anteed to possess full antiknock qualities as well as to give a larger mileage but it is not a higher test product. It sells at the same price as its regular Navy grade. Natural gasoline has been quiet so far as this market is concerned and quotations are slightly lower. The supply is stated to be very ample.

Kerosene Lower

Kerosene is easy in tone and lower in price. The demand has fallen off with the suddenness that was predicted for it, and occasional cars are about all that is being ordered. For the 41-43 gravity the present quotations are 9½ cents as a rule although some are still asking ⅛ cent more and a few are quoting 9¾ cents but not to get the business. The real question seems to be not what the present price is but where will it be in say a week or two weeks from now.

Distillate Prices

There is a steady business doing in distillates. Not large but it is still surprising that most of the dealers report they sell some cars every day. The oil burners are still being used and they are very convenient these cool nights and mornings and this seems to account for the present business. The demand is for the 38-40 straw distillate for which the present market is 4¾ to 5 cents. Strength is given to the present situation by the free predictions that the prices will be materially higher next season which makes the jobbers more willing to carry over a quantity in their tanks and it is not impossible some of the distributors with sufficient storage are quietly putting by a certain quantity from time to time as the occasion offers. The refiners have certainly placed the distributors of oil as well as the makers of the domestic burners in a worried state of mind. This was shown at the meeting of the Chicago Oil Men's Club on Thursday of this week. The refiners' representatives predicted that the price of distillate at Group 3 shipping points would not be less than 8 cents, some said 9 to 9½ cents. The oil burner men contend this is a prohibitive price as it puts the cost of heating with oil in the larger cities at least where the gas companies can compete. Gas has certain appealing advantages over oil, no storage being required, only the quantity used being paid for and that from 10 to 40 days after it has been used. In the matter of furnace oils no one seems to have the courage of his convictions unless it be the gas companies who are preparing for a greatly increased use of their product through the enlargement of their mains and the extension of their distributing systems. As an example, a prominent marketer said to a number of oil men, "If I will right now contract with you to supply your requirements up to a stated quantity over the season at 7½ cents, will you agree to take the oil no matter what happens?" The jobbers promptly said they would do so. The oil man continued, "If the price drops to 5½ cents, will you continue to take the oil at 7½ cents, even if your competitor buys at 5½ cents and sells on that lower basis of cost?" This was according to the jobbers, a different matter. "No, of course you wouldn't?" said the marketer and dropped the matter. Neither side had the courage of its convictions and the final result is very likely to be that the question of price will remain unsettled until some of the larger organizations names its price which they will have to do ultimately even if it be only a temporary one at the date of delivery and the industry will fall in line. In the meantime the makers of the oil burners say they are not being given a square deal by the oil men and that the latter are killing the goose that has laid some golden eggs and has a lot more for the future, if given a chance to get on its feet. The burner men quote statements by leaders in the industry that there would always be a supply of oil available at a price that would be attractive to the public consumers even if something higher than at the time the campaign to put the oil industry back of the oil burner was launched.

Gas Oil Unsettled

The market for gas oil is not active and is rather unsettled, the situation being a little easier some days and stronger the next, according to marketers, but even these do not agree as to the exact conditions on the same day. There is only a limited demand from industrial users. Some oil was offered at 3⅞ cents during the week but it was a cracked gas oil of rather undesirable qualities. For uncracked gas oil the price is at present determined by the demand from refiners who are absorbing pretty nearly all that is offered and the local quotations range as high in some instances as 4½ cents while for the cracked product, the market ranges according to quality and other conditions from 4 to 4½ cents.

Fuel Oil Slack

The demand for fuel oil is very slack and many of the larger buyers are becoming very peeved at the prices asked. One of the best known fuel oil men told an incident in regard to this. He called on a large consumer whom he had sold for years and who seldom if ever had bought less than 25 cars at a time and who could be counted on under usual conditions for a 50-car order. With great difficulty he secured an order for five cars. As he gave the order the buyer said almost angrily, "If you oil men do not make us lower prices for fuel oil, we shall turn to industrial gas. That is the coming fuel any way for us." If the gas companies used as much oil in their process as they formerly did, the change such as suggested by this buyer would not be so bad for the oil man but the gas companies are using much less oil under their new methods. I am told that while the Chicago gas company formerly took in from 10 to 20 cars a day it now requires but two or three. I have not been able to verify this statement but I have noted that at one of the gas plants where there were formerly several cars always on the track discharging oil, today these tracks are empty. At this particular plant the number of cars unloaded has certainly been decreased materially. I am also told that several of the local brick yards are experimenting with gas to bake their brick. They have been among the largest industrial users of fuel oil. Some makers have said the cost of brick is so stabilized by existing contracts over considerable periods the price cannot be advanced to users and they cannot stand any increases in cost to make. In this industry the fuel cost is a large item. Of course, as the oil buyers with the Cudahy Packing Co., said a couple of weeks ago, "If fuel oil is worth more to the refiner to crack than it is to sell, then the refiner can keep his oil and crack it and the large industries will find other fuels." The Cudahy plants, he stated at the time, were to be equipped so that they could burn powdered coal.

Prices for fuel oil have held with more firmness than was expected. There is little change in the refinery costs to buy. Sellers to secure their share of the business going have not only continued to "split the nickel" in quoting but have resorted to decimals to be able to name a still closer price. The going market for refinery 24-26 fuel oil is $1.30 to $1.35, and practically any grade under this is held at $1.25. Several refiners state they are selling their 16-18 cracked fuel oil to large buyers at $1.25 in buyers' cars. The Smackover movement is fairly large and the usual price is $1.20 with occasional sales at $1.17½ in most cases being oil bought before the recent crude advances.

Lub Demand Good

There seems to be nothing specially new in the lubricating oil situation, the demand being reported as good for motor oils especially neutrals and very fair for all kinds of lubricating oils and greases. The stocks are quite generally stated to be light and several refiners state they have orders ahead for some time on the most wanted grades. Prices are steady. Reports from Pennsylvania are that the pipeline companies have their storage

(Continued on page 136.)

EASTERN PRICES ARE MAINTAINED BUT WEATHER SLOWED ACTIVITY

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York

NEW YORK, June 5. — There has been little change in the oil situation on the Atlantic Coast except that important price changes were practically absent and that the atmosphere seemed a little more quiet. The three-day holiday over Memorial Day did not bring quite the rush of business expected, according to some marketers. The first two days were favorable, so far as weather conditions were concerned, but the third was attended by rainfall. The week as a whole has witnessed continued cool weather, although sunny.

Attention to recent weather conditions is called especially at this time, because a year ago the Atlantic Seaboard area witnessed some of the hottest weather of the entire year 1925. There was a 10-day stretch of actually unbroken heat early in June, which forced the population of all of the cities into their motor cars in every possible minute. This is in decided contrast to the cool, or even chilly, atmosphere which has prevailed with practically no break so far this spring. There is no doubt that prevailing weather conditions must be taken into account in estimating the trend of gasoline consumption, the greater registrations alone being held responsible for the increase this year over 1925.

Although the price trend in oil products has been distinctly upward so far in this territory, and there is no reason to expect a change for the near future, there seems now to be a lack of feverish activity which was prevalent at this time last year. In fact operations seem to have slowed up somewhat during the past week. There does not seem to be a rush of petroleum products to the Atlantic Seaboard by tanker, although tonnage is apparently available to move more than is actually being carried. Stocks of gasoline and other products on hand seem ample to care for the current demand, with additional allowance for a seasonal increase. Atlantic Seaboard refiners are said to be well stocked with both crude and refined, and are not bidding in the open market either for crude oil or gasoline. Current contracts are supplying them with all the oil they need from Mexico and California, and their takings from the Southwest are only moderate.

Estimated receipts of crude and refined oil by tanker during May were 523,000 bbls., compared with 564,000 bbls. in April, a peak of 592,000 bbls. in March, and 538,000 bbls. in May, 1925.

A comparison of the sources is interesting as bearing on the probable demand on the Atlantic Coast (daily averages, bbls.):

	May 1926	April 1926	March 1926	May 1925
Gulf Coast	318,000	326,000	317,000	312,000
Pacific Coast	66,000	92,000	97,000	81,000
Mexico	114,000	126,000	152,000	136,000
South America	25,000	20,000	26,000	9,000
Total	523,000	564,000	592,000	538,000

Under the division "South America" is included Trinidad, as well as Venezuela and Peru.

Gasoline Prices

Gasoline prices have held relatively firm on the Atlantic Coast during the past week. Refinery gasoline is scarce. Tank car gasoline from the Mid-Continent is in more liberal supply, but prices have not been shaded. No change is evident at service stations, the irregularity in retail quotations being as evident as ever.

Kerosene Weakens

Kerosene has shown a slightly soft tendency, with the refinery price on prime white tending a little lower. As yet this tendency is not pronounced, and it is far too early to make any estimate as to its extent.

Gas and Fuel Oil Unchanged

The gas oil market is somewhat easier. Fuel oils are also unchanged with a slight weakness noted in offering prices. Bunker oil has remained at present levels for some time, and some refiners are wondering if the next move will not be downward. Consumption is not holding up nearly as well as many factors had expected it to.

It may be also that the pressure on the fuel and gas oil market from refiners who have been "cracking" it is lessening somewhat.

Lubricants

The market for lubricating oils is steady. Demand is even better than a week ago, which was expected when inquiries from industrial users began to come in. These are being followed up in satisfactory manner with substantial orders. Jobbers are reported busy in lubricants, greases and wax for industrial plant operations.

Red and pale oils are in especially good demand at present and prices seem to be definitely recovering from the recent low levels.

Cylinder oils and bright stock are somewhat soft in sympathy with the trend of the western Pennsylvania refinery markets.

Paraffin Wax

Wax exhibits no special feature, so far as the domestic demand is concerned. Prices are holding steady at the recently advanced levels.

"Lubs" and the Panhandle

Large lubricating oil marketers are watching the developments in the Panhandle Field in view of the reported large wax and lubricant content of Panhandle crude. Of course this oil is considered still far from a market factor, yet a continued gain in output, with ultimate transportation to markets, would, it is believed, affect prices for both lubricants and wax. Panhandle crude is apparently of a somewhat different quality than any yet discovered.

Petrolatum

The petrolatum market continues to weaken, with prices reaching new lows, according to quotations furnished by local jobbers. Amber is off another ⅛ cent, but lily white and snow white show more extensive losses. Lily white is now available at as low as 7¾ cents, a loss of ¼. Snow white has been shaded to 8¾ cents down ½ cent.

This bears out expectations that the situation would develop further weakness before any improvement would take place. Factors are now hoping, however, that the market will turn the corner before long.

Tanker Charters

Although recent fixtures of petroleum tankers have been at about peak rates, the actual number of charters continues small. This must be attributed to the scarcity of boats available.

That there is no oversupply of tanker tonnage at the present time is shown not only by the high rates paid for current fixtures but by the activity in tanker building and purchasing. Atlantic Refining Co. recently bought two additional tankers from the Shipping Board; Gulf Refining added a big boat to its fleet, the "Gulfcrest," capable of carrying 105,000 bbls. of oil. Two new Diesel-propelled tankers completed in British yards were sold immediately, one to a German firm and another to the Anglo-Persian Oil Co.

New fixtures include the following:

Tanker Niobe (Br.), 4,320 tons net, one or two ports California, to United Kingdom-Continent, 44s., one port, 45s. two ports, July-August loading. (Gasoline).

Tanker W. W. Mills (Am.), 4,245 tons net, Gulf to north of Hatteras, 40 cents, not east of New York, June loading.

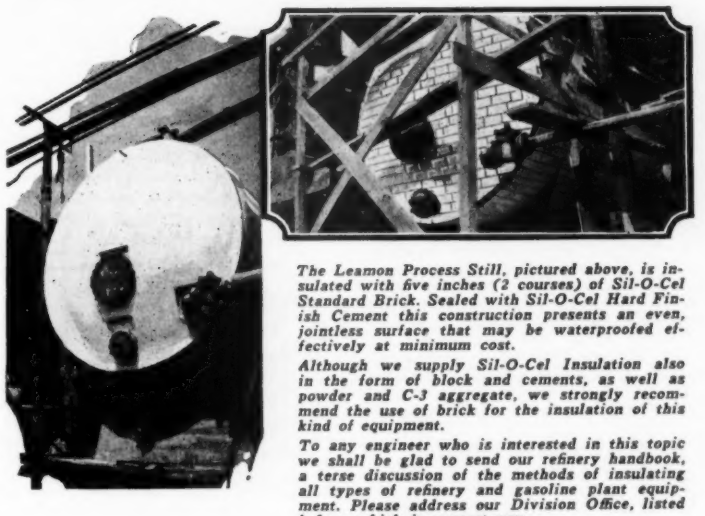
Tanker Sunik (Fr.), 6,000 tons gasoline, north Atlantic to United Kingdom-Continent, 24s. 6d., option Gulf loading, 27s. 6d., June-July loading.

Tanker Republic (Am.), 3,700 tons net, fuel oil, Tampico to New York 44 cents a barrel, June loading.

One interesting feature of the export

(Continued on page 136)

SIL-O-CEL
HEAT INSULATION



The Leamon Process Still, pictured above, is insulated with five inches (2 courses) of Sil-O-Cel Standard Brick. Sealed with Sil-O-Cel Hard Finish Cement this construction presents an even, jointless surface that may be waterproofed effectively at minimum cost.

Although we supply Sil-O-Cel Insulation also in the form of block and cements, as well as powder and C-3 aggregate, we strongly recommend the use of brick for the insulation of this kind of equipment.

To any engineer who is interested in this topic we shall be glad to send our refinery handbook, a terse discussion of the methods of insulating all types of refinery and gasoline plant equipment. Please address our Division Office, listed below, which is nearest you.

Why Brick Insulation?

The easiest way to insulate steel surfaces against heat radiation losses is with Sil-O-Cel Insulating Brick. The most efficient insulated construction also is attained by using insulating material in this form. And the cost is lowest by far, when you compare on the basis of heat savings and length of service from the insulation.

A Smooth Surface

On the shells of stills, absorbers, heat exchangers, towers and other steel equipment, curved or flat, Sil-O-Cel brick in thicknesses of 1¼ inches or 2½ inches are simply cemented to the metal, and secured in place by wire reinforcing. A final coating of Sil-O-Cel Hard Finish Cement seals all joints and leaves an even, unbroken surface, an ideal base for a waterproofing compound, such as Celcote.

No Gaps

There are no gaps in this insulated construction, where air could get through and circulate inside the insulation. Every bit of the insulation is in absolute contact with the steel—and every bit of the steel can be covered. Removing a portion of the insulation for attention to the steel underneath, entails no great amount of trouble. The insulating brick removed can be replaced with practically no loss.

Cuts Warehouse Costs

But the first advantage of Sil-O-Cel Brick is their wide adaptability. The "fire brick size" insulating brick that you use in still-furnace walls and boiler settings, where direct temperatures may run as high as 1600° F., are the most efficient insulating material you can get for any heated equipment in refinery or gasoline plant. You stock only one grade, one shape, one size of insulating material when you standardize on Sil-O-Cel brick insulation over all hot steel surfaces.

CELITE PRODUCTS COMPANY

11 Broadway New York · 53 W. Jackson Blvd · Chicago · 1320 S. Hope St · Los Angeles · Monadnock Bldg · San Francisco

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Celite Products Corporation · London · Eng.

OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

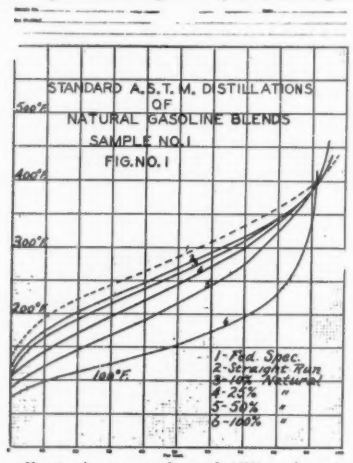
Motor Fuel Value of Natural Gasoline

Tests Indicate That Product Has Antiknock Characteristics and Gives Greater Power. Volatility Important

By Dr. E. H. Leslie and G. G. Brown
University of Michigan

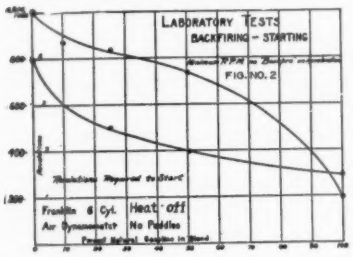
The motoring public is generally aware of the fact that ease of starting and acceleration are due largely to the more volatile components in gasoline. "Detonation" was not recognized, except as a "carbon knock," until about 12 years ago, when the refineries began to include more and more of the heavier fractions in commercial gasoline, steadily raising the endpoint from 300 degrees Fahrenheit to 437 degrees Fahrenheit, compelling the manufacturers of motor vehicles to build engines of lower compression pressures.

Natural gasoline, being composed only of the more volatile components of Federal specification gasoline, and used gen-



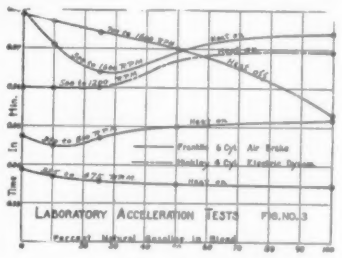
erally to increase the volatility of motor fuel, is, by virtue of its volatility, essentially the cream of the gasoline fraction.

For the tests reported in this paper, straightrun natural gasoline, obtained through a local dealer from the Champlin Refining Co., Enid, Okla., made from Billings crude (car A.H.C.V. 493, shipped April 15, 1926), having the A.S.T.M. distillation curve as shown by curve 2, Figure 1, and A. I. P. gravity 57.5, was used as a standard blending stock. For acceleration and power tests this straight run stock was blended with natural gasoline obtained through the Staebler Oil Co., Ann Arbor, from the Liquefied Petroleum & Gasoline Co. of Tulsa and shipped from Eram, Okla., hereafter designated as natural gasoline sample No. 1, having the A. S. T. M. distillation curve as shown by curve 6, Figure 1, and A. P. I. gravity of 771 and 94 degrees recovery. In addition to these two fuels, blends containing 10, 25 and 50 per cent by vol-



ume of natural gasoline No. 1 were made, having the distillation curves as shown by curves 3, 4 and 5, Figure 1, and A. P. I. gravities of 60.4, 63.0 and 66.9. Curve 1, showing the Federal specification gasoline, is given for reference in Figure 1 and all other figures showing distillation curves.

The first tests conducted were for ease of starting and freedom from backfiring. These tests were made on a Franklin air-cooled, six-cylinder, valve-in-head engine, driving an air dynamometer. It would be desirable to make these tests on a cold engine to represent actual starting conditions, but this is practically impossible because the engine becomes warm while the test is being made, making consistent results on a cold engine out of



the question. For this reason these tests were made after the engine was at operating temperature. But in order to approximate starting conditions, the exhaust manifold was not connected to the hot spot on the intake manifold as is the standard method of operation. This method of testing with the intake manifold unheated is designated on the curves by "heat off."

Starting Test

The starting test was conducted by setting the throttle at one-half open, closing the choke and pressing the starter button until the first explosion occurred when the engine would operate under its own power. The ease, or rather difficulty, of starting is indicated by the number of revolutions of the engine before the first explosion. The tests were repeated six times and averaged, with the results shown in Table I and by the lower curve of Figure 2:

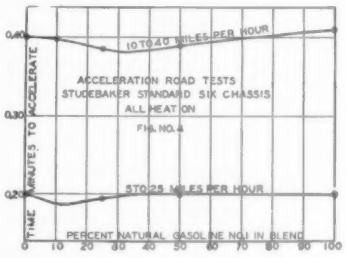
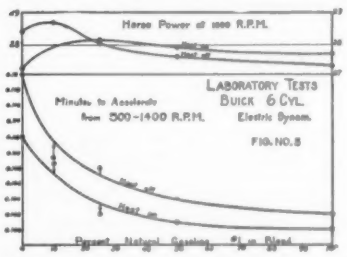

ACCELERATION ROAD TESTS
STUDEBAKER STANDARD SIX CHASSIS
ALL HEAT ON
FIG. NO. 4
10 TO 40 MILES PER HOUR
5 TO 25 MILES PER HOUR
TIME MINUTES TO ACCELERATE
PERCENT NATURAL GASOLINE NO. 1 IN BLEND

Table 1

Pct. Natural Gasoline No. 1 in Blend	No. Revolutions to Start Engine, Throt. ¼ Open Choke Closed
0	4.0
10	3.0
25	2.5
50	2.0
100	1.5

The tests to determine tendency to backfire consisted in determining the slowest speed at which the engine could be operated without a sudden opening of the throttle to the full open position causing a backfire. The data obtained in this



series of tests are given in Table 2 and are represented by the upper curve in Figure 2. It was found that the engine could not be operated at less than 1,000 R. P. M. with the straightrun gasoline without causing a backfire when the throttle was suddenly opened, but that the engine could be operated at 200 R. P. M. when using natural gasoline No. 1 without causing a backfire upon sudden opening of the throttle.

Table 2

Pct. Natural Gasoline No. 1 in Blend	Minim'm R.P.M. to Prevent Backfiring Upon Sudden Opening of Throttle to Full Open Position
0	1000
10	870
25	830
50	750
100	200

Acceleration Tests

Laboratory acceleration tests were made with the same fuels on the same engine, with the manifold unheated. These tests consisted in measuring the time required to accelerate the engine and air dynamometer from 700 R.P.M. to 1,600 R.P.M. The initial speed of 700 R.P.M. was chosen because it was the lowest speed at which the engine would operate smoothly on the straight run gasoline. These data, reported in Table 3 and Figure 3, represent the average of six check determinations. The time required to accelerate this engine with the unheated manifold from 700 R.P.M. to 1,600 R.P.M. when using straight run gasoline was almost 0.08 minutes (4 4/5 seconds.) The time required decreased steadily with increasing natural gasoline in the fuel blend to 0.053 minutes (3 1/5 seconds), when using straight natural gasoline.

Further acceleration tests were conducted with the exhaust heat on the intake manifold, as is the usual method for this engine. With the intake manifold heated, the engine could be operated smoothly at 300 R.P.M. on the straight run gasoline. Accordingly these tests consisted in measuring the time required to accelerate the engine and dynamometer from 300 R.P.M. to 1,600 R.P.M. The results are given in Table 3 and Figure 3.

Large paddles were then bolted on the arms of the air dynamometer to increase the load on the engine. Acceleration tests were then made in the same manner as described, from 350 to 500 R.P.M. and from 325 to 475 R.P.M.

The data obtained from these tests are tabulated in Table 3 and plotted in Figure 3.

Table 3

	Minutes Required to Accelerate			
	Moderate Load		Heavy Load	
	Cold Manifold	Hot Manifold	Hot Manifold	
Pct. Natural Gasoline No. 1 in Blend	From 700 to 1,600 R.P.M.	From 300 to 1,600 R.P.M.	From 350 to 500 R.P.M.	From 325 to 475 R.P.M.
0	0.079	0.08	0.0475	0.039
10	0.077	0.071	0.045	0.037
25	0.074	0.064	0.047	0.036
50	0.070	0.069	0.05	0.035
100	0.053	0.074	0.052	0.035

Natural Gasoline Results

Comparison of these data brings out several interesting facts:

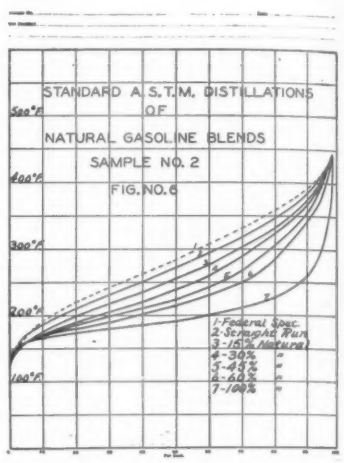
1. Time required to accelerate to relatively high speeds, 1,600 R.P.M., under light or moderate load, and at very low speeds, is less for natural gasoline than for straightrun gasoline.

2. With a heated manifold the best acceleration is obtained with 30 per cent natural gasoline in the blend when the engine is operating under moderate load, and with 15 per cent natural gasoline in the blend when operating at moderate load but at low speeds.

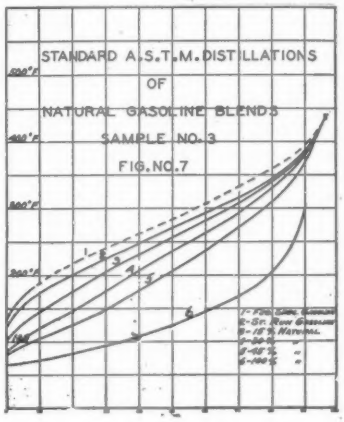
3. With a heated manifold and accelerating from very low speeds, the best results are obtained with about 50 per cent of natural gasoline in the blend.

4. A heated manifold gives better acceleration except with very volatile fuel such as straight natural gasoline or those blends containing large amounts of natural gasoline.

It must be kept in mind that the con-



ditions throughout all tests were such as usually obtain in modern automobile engines built and adjusted for ordinary



commercial gasoline, and that engine or carburetor characteristics play a very important part. For this reason further tests on engines of other types were considered necessary to show the effect of fuel volatility independent of any individual engine characteristics.

The data given in Table 4 and plotted as the broken line in Figure 3 were obtained by determining the time required to accelerate a four-cylinder, ell-head, water-cooled Hinkley truck engine from 500 to 1,200 R.P.M. The engine was governed at 1,200 R.P.M. so that this speed could not be exceeded. The manifold was of the ramshorn type and heated. This type of manifold has pockets in which the less volatile liquid fuel collects at low gas velocities and is swept out of the manifold into the cylinders at the higher gas velocities accompanying higher speeds. For this reason the distribution of the less volatile fuel is poor,

*Paper based on discussion at annual meeting of the Association of Natural Gasoline Manufacturers, May 6, Tulsa, Okla.

giving results which differ somewhat from those obtained on the six-cylinder air-cooled engine. However, this test verifies the conclusion that for considerations of acceleration the volatility should not exceed that corresponding to 30 per cent natural gasoline if the intake manifold is heated by the full heat of the exhaust.

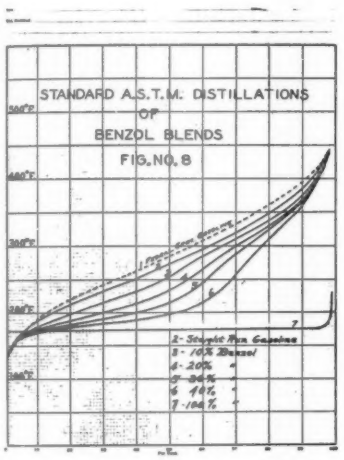
Road Tests

Actual road tests for acceleration were made with one of the university's test cars, a Studebaker standard six chassis, ell-head, water-cooled engine. These tests were made by observing the time required to accelerate from 10 to 40 miles per hour and from 5 to 25 miles per hour with a heated manifold. In order to eliminate any wind effect the test was conducted by driving up and down a chosen section of level highway and averaging the results. The third and fourth columns of Table 4 and the curves of Figure 4 give the results of these tests:

Table 4

	Minutes to Accelerate		
	4-Cylinder Engine	6-Cylinder Chassis	
	Heat on	Heat on	
Pct. Natural Gasoline No. 1 Blend	500 to 1,200 R.P.M.	10 to 40 Mi. Hr.	5 to 25 Mi. Hr.
0	.060	.400	.200
10	.060	.387	.188
25	.060	.385	.195
50	.067	.390	.200
100	.069	.410	.200

The results of the road tests are exactly equivalent to those obtained in the laboratory, and verify the conclusions that with a manifold heated by the full heat of the exhaust, a fuel volatility corresponding to that of a 30 per cent natural gasoline blend gives the best acceleration to relatively high speeds, and



that a fuel volatility corresponding to that of a 15 per cent natural gasoline blend gives the best acceleration at low speeds.

The three engines used in the above tests were equipped with manifolds heated by the full heat of the exhaust. Further tests were made on a Buick six-cylinder, valve-in-head, water-cooled engine equipped with an intake manifold heated by the full heat of the exhaust only when the throttle is nearly closed. As the throttle is opened, a butterfly valve in the exhaust pipe is opened automatically, allowing the exhaust gases to pass directly through the exhaust pipe without heating the intake manifold. Acceleration tests were made on this engine in the same manner as has been described. The results (Table 5 and Figure 5) are quite different from those obtained on engines in which the entire heat of the exhaust strikes the intake manifold. In the tests reported in Table 5 and plotted in Figure 5 "heat off" indicates no exhaust heat on the intake manifold, and "heat on" indicates a variable amount of heat decreasing with opening throttle in the manner described.

The power developed at 1,000 R.P.M. with open throttle was determined by means of the electric dynamometer. As part of the exhaust gases by-pass the intake manifold at open throttle, "heat on" indicates less heat than in the case of the other engines.

Table 5

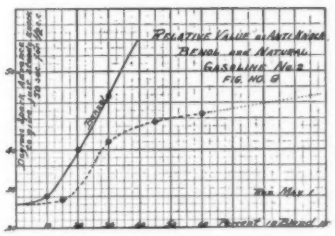
	Minutes to Accelerate		Horse Power at	
	500 R.P.M. to 1,400 R.P.M.		1,000 R.P.M.	
Pct. Natural Gasoline No. 1 in Blend	Heat off	Heat on	Heat off	Heat on
0	0.120	0.112	28.4	27.2
10	0.109	0.1055	28.7	27.9
25	0.108	0.102	28.0	28.1
50	0.104	0.101	27.6	27.9
100	0.102	0.100	27.3	27.7

These results show a 12 per cent increase in acceleration with a heated manifold as the fuel volatility is increased from that corresponding to the straight run gasoline to that corresponding to straight natural gasoline, and a similar somewhat larger increase in acceleration with a cold manifold. Table 2 shows a 33 per cent increase in acceleration from 700 R.P.M. to 1,600 R.P.M. with a cold manifold on the air-cooled engine. The differences in the case of the hot manifold may be largely explained as due to the differences in manifold heating control. With cold manifolds the results are similar, differing in degree only, and may be explained as due to the different engine characteristics and to the different speeds at which the tests were run.

As is to be expected, the power readings indicate a greater power output with a cold manifold, at least with the less volatile fuel. The reason for the power increase in the case of more volatile fuel, when using a heated manifold, is not clear, unless it be due to the carburetor characteristics or adjustment. The curves of Figure 5 indicate that under the conditions of test the power output may be slightly increased by using a more volatile fuel than the straight run gasoline, but that power may be slightly decreased if the fuel is too volatile. About 30 per cent of natural gasoline in the blend gave the maximum power with a heated manifold and about 10 per cent of natural gasoline gave the maximum power with a cold manifold. It will be noticed that the decrease in power when using straight natural gasoline is negligible with a heated manifold and more noticeable with a cold manifold. These results need further verification before they may be taken as general truths.

Results of Tests

The acceleration tests on engines of four different types are sufficiently com-



plete to allow a few generalizations:

1. With a cold manifold, or a manifold heated to a limited degree only, the best acceleration is obtained with the most volatile fuel.

2. With a manifold exposed to the full heat of the exhaust, the best acceleration is obtained with a fuel having a volatility equivalent to that of a 15 to 30 per cent natural gasoline blend, depending upon whether acceleration to moderate or high speeds, respectively, is desired.

3. For acceleration at extremely low speeds a more volatile fuel is desirable.

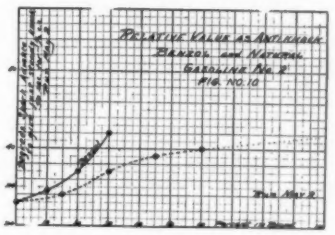
4. A manifold heated at least to a limited extent gives better acceleration with all fuels tested.

Antiknock Properties

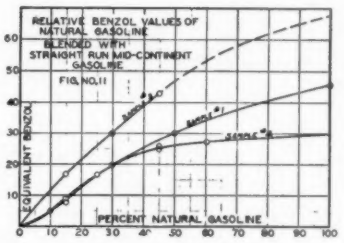
Testing the knocking properties of a fuel is at best rather difficult, and, as no tentative standard method for making these tests is recognized, the results reported by various investigators, using different methods, are frequently in poor agreement, and not comparable at all. For these reasons it is necessary to outline in some detail the method used for determining the antiknock properties of natural gasoline.

A Delco Light engine equipped with a high compression head (ratio 6.5 to 1), a standard Ford carburetor, bouncing pin and Prony brake to aid in controlling the speed, was used in all the tests. The engine is an air-cooled, valve-in-head, single cylinder engine, mounted with direct driven generator on a common base. The vaporizer supplied as standard equipment with the engine, having no flat chamber, needle valve or throttle, was found unsatisfactory and was replaced by the standard Ford carburetor.

The bouncing pin, developed by the Research Laboratories of the General Motors Corp., is a satisfactory device for measuring the intensity of engine knock, and is widely used for this purpose. Essentially, the bouncing pin consists of a heavy pin resting on a small piston flush with the inner surface of the engine head. The piston is backed by a heavy spring, so that during normal combustion the



pin moves up and down only a few thousandths of an inch, resting on the small piston. But when detonation occurs in the combustion chamber the bouncing pin is thrown upward clear of the piston, with an amplitude dependent upon the intensity of the knock. In order to measure the amplitude of motion of the bouncing pin and thereby the knock



intensity, electrical contacts are placed above the pin, which are pushed together when the pin is thrown free of the piston, making a longer contact as the intensity of detonation increases. These contacts are connected in series with a 110-volt D.C. power line, a 50-watt lamp and an electrolytic cell filled with 10 per cent sulphuric acid. The volume of electrolytic gas produced in the cell per unit of time is equivalent to the intensity of the engine knock, and the time required to produce a unit quantity of gas varies inversely as the intensity of the knock.

As we wished to measure the tendency of different fuels to knock, and not the relative intensity of the knock produced, the bouncing pin was used in these tests to indicate when a knock of a predetermined intensity was set up in the engine.

Series of Tests

A series of tests consisted in running the engine with a constant throttle, constant carburetor adjustment, at a constant speed of 1,200 revolutions per minute, with the different fuels, and measuring the degrees spark advance before top dead center that would cause the engine to knock with the predetermined intensity as indicated by the bouncing pin. For comparison, benzol blends were run alternately with the natural gasoline blends, and the final results represent the relative effectiveness of natural gasoline as compared to benzol in preventing engine knocking when blended with straight run Mid-Continent gasoline.

In starting a series of knocking tests, the engine was first run at full load for about 45 minutes to get it thoroughly warmed to operating temperature. Then the carburetor and spark advance were adjusted carefully until the engine was knocking mildly but consistently on straight run gasoline. The bouncing pin was carefully cleaned and adjusted to give one-half cubic centimeter of gas in 50 seconds. The carburetor bowl was then drained and the supply of natural gasoline blend connected. The spark advance was then adjusted with everything else constant, until one-half cubic centimeter of gas was collected in 50 seconds. The bowl was then drained and a check run made on straight run gasoline. If consistent results were obtained a benzol blend was then tested in the same manner. If the results were inconsistent the data were rejected and the run repeated.

For making knocking tests three different samples of natural gasoline were blended with straight run gasoline and compared with similar benzol blends. Sample No. 1 having an A. P. I. gravity of 77.1, with 94 per cent recovery, was made into 10, 25 and 50 per cent blends as shown in Figure 1.

Sample No. 2 was a special research sample supplied by the Phillips Petroleum Co., and represents the residue obtained after removing the butanes and pentanes from Oklahoma natural gasoline by careful fractionation. This sample had an A.P.I. gravity of 65.2, with 100 per cent recovery and an A.S.T.M. distillation as shown by curve 7 in Figure 6. Fifteen, 30, 45 and 60 per cent blends were made as indicated in Figure 6.

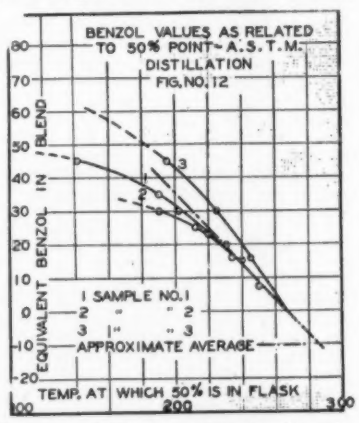
Sample No. 3 is a composited sample of stabilized gasoline obtained from a number of plants, and also supplied by the Phillips Petroleum Co. This sample had an A.P.I. gravity of 83.9, a recovery of 90 per cent, and an A.S.T.M. distillation as shown by curve 6, Figure 7. It is the most volatile sample tested and shows the best antiknock properties. Blends of 15, 30 and 45 per cent were made as indicated in Figure 7.

For comparison 10, 20, 30 and 40 per cent benzol blends were made as indicated by the A.S.T.M. distillation curves shown in Figure 8.

Compared With Benzol

At least two series of runs were made with each series of natural gasoline blends under different carburetor and throttle adjustments. This was done to eliminate so far as possible any peculiar conditions of engine or atmosphere that might exist on one day or at one particular set of adjustments. It is sometimes surprising what a relatively powerful influence a slight change in conditions will have. Opening a window, or changing the temperature or weather conditions, will frequently have as much effect as 10 per cent of benzol.

Having explained the method of making knocking tests, the detailed data so obtained will not be presented in tabular form. Figures 9 and 10 indicate how the



data were plotted to determine the relative values of benzol and natural gasoline as antiknock materials. These figures represent the data obtained on different days under different conditions, but with the same fuels. Although different degrees of spark advance were obtained, the relative values of benzol and natural gasoline as obtained in different series of runs are practically identical.

These data and other similar data obtained for the other blends, plotted aginst equivalent benzol value in Figure 11, show the consistency of this method and the relative values of the different natu-

(Continued on Page 132)

REFINING AND MARKETING

Furnace Oil Outlook Debated By Refiners At Chicago Oil Club

CHICAGO, June 5.—At this week's meeting of the Chicago Oil Men's Club there was a continuation of the discussion regarding the furnace oil outlook that began the preceding meeting. Several refiners were requested to be present and give their view of the situation. Several responded to the invitation and expressed their views. Among the speakers was B. L. Majewski, of the Shaffer Oil & Refining Co. He stated that the supply of furnace oils was bound to be much less than a year ago. At that time his organization had a large supply of distillate, gas and fuel oils. Today they had no distillates or gas oil and very little fuel oil. He said that his organization had recently sold a large quantity of fuel oil for cracking at prices averaging $1.40 a barrel. Asked what might happen when they closed down their cracking plants in the fall, he said the present indications were that the crackers would be operated right along and that crude would be stored, stating it was more profitable to buy fuel oils and crack them than to run the crude, considering the condition of the crude supply.

It was also stated that the larger refiners operating plants without cracking stills would find a ready market for all the oils they had to sell with the operators of cracking plants. Representatives of the Marland Refining Co., Sun Oil Co. and Empire Refineries, Inc., also made substantially similar statements. Some of the marketers urged there would be available supplies of cracked distillate and the like that would make a very good furnace oil for the types of oil burners that did not require too low a flash point. The prices suggested as likely to prevail were from 8 cents to 9½ cents for a good distillate, these prices being the viewpoint of the various speakers.

Among those present were some eight or more oil burner men and they found little satisfaction in the statements made by the representatives of the refining interests. One statement was made that the president's oil board was not unlikely to suggest some restrictions on the free use of so valuable a product as petroleum as fuel. At the close of the meeting one of the oil burner men stated that the asking of any such prices as named for a usable grade of furnace oil was going to play into the plans of the gas industry, which was already very active in securing contracts for the use of gas both for industrial and domestic consumption. There were about 50 present at the meeting, which was in session for over two hours.

KANSAS GASOLINE TAX

TOPEKA, Kans., June 5.—The gasoline tax of 2 cents a gallon brought more than $4,000,000 into the State treasury its first year. Receipts from May 1, 1925, to May 1, 1926, totaled $4,152,381.04, Seth G. Wells, state oil inspector, reported. The last legislature, which enacted the gasoline law, has limited the use of this revenue to the building and maintenance of roads.

WYOMING BANS ETHYL

The oil division of the State Department of Agriculture in Wyoming has forbidden the sale of gasolines containing ethyl products. The inspection department states that the sale will not be permitted until the legislature has had an opportunity to pass on the question. The action of the State is said to be based on provision of the Wyoming law which states that all gasoline sold shall be water white.

TANKWAGON POSTINGS IN COUNTRY ARE HIGHEST SINCE JULY 1, 1923

Not since July 1, 1923, have tankwagon prices of gasoline in this country been as high as on June 1, this year. Steady advances in postings in all marketing territories since the first of the year have boosted the average price in the 50 representative cities compiled by The Oil and Gas Journal to 19.607 cents, a record not only for this year but also for 1924 and the latter half of 1923.

It was in 1923 that the country experienced some exceptionally high prices, the average for several months previous to July 1 being above 21 cents. On July 1, 1923, these prices were on the decline, the average posting on that date being 19.89 cents, which was only 0.78 cent above that of June 1, this year.

The average price on June 1, this year, represented an increased of 1,090 cents over that of the first day of the previous month and a gain of 3.474 cents since January 1. June 1 was the first time since August 1, 1924, that the average was above 19 cents.

Average Tank Wagon Prices in Fifty Cities

June 1, 1925	19.122
July 1	19.387
August 1	19.413
September 1	16.703
October 1	15.808
November 1	15.528
December 1	15.763
January 1, 1926	16.133
February 1	16.213
March 1	17.267
April 1	18.517
May 1	18.487
June 1	19.607

The advances during May were largely the result of general crude advances the middle of the month, although during the past two months tankwagon postings have shown a decided trend upward. In this period, every marketing area in the country, except the Pacific Coast, has experienced at least one general raise and many of them three or four.

The tankwagon advances, however, were made in the face of weak tank car markets and declining refinery prices. For a period during April refinery gasoline was firm, but since then the trend has been downward except immediately after the crude advances when quotations were boosted a cent to absorb the increase in cost of raw material.

The average posting in the 50 cities on June 1 lacked only 0.040 cent of equaling the average of the high prices in 1924, as shown in the accompanying table, and was 5.978 cents above the average of the low prices.

The following table shows the tankwagon prices and changes in the 50 representative cities during May:

GASOLINE PRICES EFFECTIVE JUNE 1, 1926

Table showing gasoline tank wagon prices as of June 1, 1926, exclusive of taxes, in 50 representative cities, including the amount and the date of changes since May 1, 1926. High and Low prices and State taxes also given.

	Prices May 1	May Changes				Prices June 1	High and Low 1925		High and Low 1924		Taxes May 1 1926
Birmingham, Ala.	18.0	3 19.0	....	22 20.0	....	20.0	20.0	13.0	20.0	13.0	2.0
Phoenix, Ariz.	22.0	....	....	....	....	22.0	20.0	18.0	20.0	16.0	3.0
Little Rock, Ark.	16.0	....	....	21 17.0	....	17.0	19.0	12.0	18.0	13.0	4.0
San Francisco, Cal.	16.0	....	....	....	....	16.0	15.0	13.0	15.0	11.0	2.0
Denver, Colo.	19.0	1 19.0	18 20.0	....	....	20.0	20.0	12.0	19.0	12.0	2.0
Hartford, Conn.	19.0	3 20.0	....	....	26 21.0	21.0	21.0	15.0	20.0	13.0	2.0
Dover, Del.	18.0	3 19.0	....	....	26 20.0	20.0	21.0	15.0	20.0	14.0	2.0
Jacksonville, Fla.	17.0	3 18.0	....	22 19.0	....	19.0	19.0	12.0	19.0	12.0	4.0
*Atlanta, Ga.	19.0	3 20.0	....	22 21.0	....	21.0	21.0	14.0	19.0	11.0	3.5
Boise, Idaho	24.0	1 24.0	....	....	....	24.0	21.5	19.0	22.5	18.0	2.0
Peoria, Ill.	18.2	....	17 19.2	....	....	19.2	19.2	10.5	18.2	13.0	...
†Chicago, Ill.	17.0	....	17 18.0	....	....	18.0	18.0	13.0	18.0	13.0	...
Indianapolis, Ind.	18.2	....	17 19.2	....	....	19.2	19.2	13.2	18.2	13.2	3.0
Des Moines, Iowa.	19.5	....	....	....	....	19.5	19.5	13.5	18.5	13.5	2.0
†Wichita, Kans.	15.8	....	17 16.8	....	....	16.8	18.8	8.8	17.8	12.8	2.0
Louisville, Ky.	18.0	3 19.0	....	22 20.0	....	20.0	19.0	12.0	19.0	12.0	5.0
New Orleans, La.	15.5	....	....	21 16.5	....	16.5	18.5	11.5	16.5	11.5	3.0
Augusta, Me.	20.0	1 20.0	....	24 21.0	....	21.0	22.0	15.0	19.0	13.0	3.0
Baltimore, Md.	18.0	....	....	21 19.0	....	19.0	19.0	13.0	19.0	13.0	2.0
Springfield, Mass.	19.0	3 20.0	....	....	26 21.0	21.0	21.0	15.0	20.0	13.0	...
Detroit, Mich.	18.8	....	17 19.8	....	....	19.8	19.8	13.8	18.8	13.8	2.0
Duluth, Minn.	19.5	....	17 20.5	....	....	20.5	20.5	13.5	19.2	14.5	2.0
Natchez, Miss.	16.5	3 17.5	....	22 18.5	....	18.5	18.5	11.5	18.5	11.5	4.0
Kansas City, Mo.	17.9	....	17 18.9	....	....	18.9	18.9	12.9	17.9	11.9	3.0
Helena, Mont.	22.0	3 24.0	....	....	....	24.0	24.0	18.0	23.0	18.0	2.0
Omaha, Neb.	18.25	....	17 19.25	....	....	19.25	19.25	10.0	18.25	11.0	2.0
Reno Nev.	19.5	....	....	....	....	19.5	18.5	16.5	18.5	14.5	4.0
Newark, N. J.	18.0	....	....	21 19.0	....	19.0	19.0	13.5	19.5	13.5	...
Albuquerque, N.M.	22.5	1 22.5	20 23.5	....	30 26.5	26.5	23.5	19.5	23.0	18.0	3.0
New York, N. Y.	20.0	1 20.0	....	24 21.0	....	21.0	22.0	15.0	20.0	14.0	...
Charlotte, N. C.	18.5	....	....	21 19.5	....	19.5	20.0	12.0	19.0	12.0	4.0
Fargo, N. D.	20.9	....	17 21.9	....	....	21.9	20.9	14.9	19.6	14.9	1.0
Cleveland, Ohio	19.0	....	17 20.0	....	....	20.0	18.5	15.0	20.0	15.0	2.0
Tulsa, Okla.	15.0	....	20 16.0	....	....	16.0	18.0	9.5	18.0	9.5	3.0
Portland, Ore.	16.0	....	....	....	26	16.0	15.0	13.0	16.0	12.0	3.0
‡Philadelphia, Pa.	18.0	3 19.0	....	....	26 20.0	20.0	21.0	15.0	20.0	14.0	2.0
Providence, R. I.	20.0	1 20.0	....	....	24 21.0	21.0	22.0	15.0	20.0	13.0	1.0
Charleston, S. C.	18.5	....	....	21 19.5	....	19.5	20.5	12.5	19.0	12.5	5.0
Huron, S. D.	20.0	....	17 20.5	....	....	20.5	20.0	13.0	20.0	15.0	3.0
Memphis, Tenn.	17.0	....	....	....	....	17.0	18.0	10.5	18.0	12.0	3.0
§Dallas, Tex.	14.0	5 15.0	20 16.0	....	....	16.0	18.0	10.0	17.0	9.0	1.0
Salt Lake City, Ut.	22.5	1 22.5	....	....	....	22.5	21.5	17.5	21.5	16.5	3.5
Burlington, Vt.	20.0	1 20.0	....	24 21.0	....	21.0	22.0	15.0	19.0	13.0	2.0
Norfolk, Va.	18.0	....	....	21 19.0	....	19.0	20.0	14.5	19.0	14.5	4.5
Washington, D. C.	18.0	....	....	21 19.0	....	19.0	19.0	14.0	19.0	14.0	2.0
Charleston, W. Va.	18.0	....	....	21 19.0	....	19.0	19.0	14.0	19.0	14.0	3.5
Milwaukee, Wis.	18.1	....	17 19.1	....	....	19.1	19.1	13.1	18.1	13.1	2.0
Casper, Wyo.	19.0	1 19.0	18 20.0	....	....	20.0	20.0	14.0	19.0	14.0	2.5
Seattle, Wash.	16.0	....	....	....	....	16.0	15.0	13.0	16.0	12.0	2.0
Minneapolis, Minn.	19.2	....	17 20.2	....	....	20.2	20.2	13.2	18.9	12.0	2.0
Average price	18.517	....	....	....	....	19.607	19.647	13.629	18.989	13.27	2.43

*Does not include ½-cent inspection fee. †Dump of less than 100 gallons at Chicago and 50 gallons at Wichita 1 cent higher. ‡Tax paid by retail dealer. §Prices effective May 5 based on 3-cent discount from service station posting as no tankwagon schedule is maintained in Texas.

LOUISIANA STANDARD HAS NEW GASOLINE

The Standard Oil Co. of Louisiana has started marketing at all its stations a premium motor fuel under the trade name of "Esso." This gasoline, which sells at a price of 5 cents above the ordinary domestic grade of gasoline, is colored red.

In its announcement regarding the gasoline the Standard Company says in part:

"We distinguish it by a name of its own because it is more powerful than gasoline. However, 'Esso' is not intended to displace Stanocola gasoline. Stanocola gasoline is so reliable and satisfactory a product it is the ideal fuel for normal motor conditions. 'Esso' is manufactured to meet special conditions such as the following:

"1. For motors that knock.

"2. For motors with carbon accumulation.

"3. For high compression motors.

"4. For motors that have lost efficiency through long service.

"5. For motors operating under excessive loads.

"6. For any car from which the owner demands super-service."

SPOKANE SKIMMING PLANT

The Spokane, Wash., refinery of the Spokane Oil & Refining Co. now has a skimming capacity of 1,000 bbls. daily. This refinery is the only operating plant within a radius of several hundred miles. The nearest plants are those of California and Montana. The refinery is 1 mile north of Hillyard, Wash. R. K. Neill is president of the company. S. E. Smith, vice president, is general manager and has charge of sales.

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Brief Items for Plant Operators

DR. FARAGHER JOINS UNIVERSALS PRODUCTS

Dr. Edward R. Weidlein, director, Mellon Institute of Industrial Research, University of Pittsburgh, has announced the resignation of Dr. Warren Fred Faragher

Dr. W. F. Faragher

as assistant director of the institute. Doctor Faragher has accepted the directorship of the research laboratory of the Universal Oil Products Co., Chicago, Ill., and assumed his new duties on June 1.

Doctor Faragher, who is a recognized authority in petroleum chemistry, has had a distinguished career at Mellon Institute, where he has been located since 1918. He was the holder of the first Industrial Fellowship arranged for at the University of Kansas by the late Robert Kennedy Duncan, the first director of Mellon Institute, and after nine years subsequent industrial experience in the manufacture of oil products and soaps he was selected as the senior incumbent of Mellon Institute's Multiple Industrial Fellowship on petroleum.

In 1924, he was made a member of the institute's executive staff. While at the University of Pittsburgh, Doctor Faragher organized the department of petroleum refinery technology in the School of Mines and has since served as the departmental head. He is also a past-president of the Robert Kennedy Duncan Club of Mellon Institute, and a past-chairman of the Pittsburgh Section of the American Chemical Society; he has been especially active in the affairs of the petroleum division of the American Chemical Society and on various committees of the American Society for Testing Materials.

NYANZA REFINING CO. WILSON PLANT LEASED

The Wilson, Okla., refinery of the Nyanza Refining Co., has been leased by the Oklahoma Asphalt Co. The latter company is installing equipment to manufacture road oils and asphalts for all purposes. The plant at present is handling 750 bbls. daily of heavy Healdton crude. The crude runs will shortly be increased to 1,000 bbls. daily.

The Nyanza plant, which has a skimming plant of 3,000 bbls. daily, has been shut down for several months. C. R. Hemenway is president of the Oklahoma Asphalt Co. Offices of the company are located at Wilson, Okla.

DEVELOP NEW ABSORBENT MEDIUM IN NATURAL GASOLINE MANUFACTURE

CASPER, Wyo., June 5.—A new absorbing medium for the extraction of gasoline from natural gas has made its appearance in this section. While the principles involved have been known and used for some years past, the absorbing medium is an entirely new material and the process has so far proven very successful in removing all of the gasoline content from natural gas.

Dr. Edouard Urbain, a French chemist of note, in searching for a better medium than the ordinary charcoal used as a medium for the extracting of gasoline from natural gas and also used in sugar refineries for the clarifying of sugars and alcohols, discovered a process to produce a carbon which is deemed to be more efficient than other absorbing mediums. This new carbon is manufactured from peat, through a treatment with phosphoric acid and under intense heat.

Doctor Urbain and his son, Dr. Remy Urbain, perfected the new material and the officials of the Franco-Wyoming Oil Co., one of the pioneer firms in the development of the Salt Creek Field, and other fields in the Rocky Mountain region, became interested in the experiments carried on. The result was that after repeated trials, the process was installed in Poland in a commercial way and the results were satisfactory in a high degree.

P. E. DeCaplane, Edouard Chopy and Henri Boudonneau, names of significance in the early history of oil in Wyoming, as heads of the Franco-Wyoming Oil Co., decided to back the new discovery, and W. D. Waltman, former general manager of the Franco interests in Wyoming, who was in Europe at the time, was asked to examine the process as to its possibilities in America.

Mr. Waltman gave the new process a thorough examination. The result was that Mr. Waltman came to the United States and incorporated the Urbain Corporation, under the laws of Delaware to place the new process before the manufacturers and oil men of this country.

The Urbain Corporation, with headquarters at New York City, will handle the process in the United States and the Urbain Gasoline Co., a subsidiary, will handle the extraction of gasoline from natural gas in the oil regions. Mr. Waltman is president of the Urbain Corporation and Dr. Remy Urbain is with him in this country.

Results Obtained

With this new charcoal or carbon, made from peat, a test run lasting 18 months failed to show any appreciable clogging of the carbon pores. With a powerful microscope, some solidification was discovered, but the tests as to wastage in the residual gases showed not a trace of gasoline left in the gas and that the process was delivering 100 per cent of the naphtha content.

The present use of carbon as a medium for the extracting of naphtha from natural gas, uses a charcoal made from cocoanut shells and the greatest objection to this product is that the cocoanut shell charcoal fails to stand up for any great length of time in the extraction process. It has a tendency to powder and break down, clogging the piping systems and lessening its extracting power. After using the new charcoal discovered by Doctor Urbain for a period of 18 months, the grain and structure of the wood was readily seen in the samples taken from the units and there was no visible sign of the charcoal disintegrating.

While the new process is readily adaptable for the clarifying of sugar refinery liquors, alcohols and similar processes, the Urbain Gasoline Co. will devote all its attention to the placing of gasoline plants in the oil fields of this country. The Standard Oil Co. of Indiana has become interested in the new process and preparations are now under way under the direction of Dr. J. G. Dely, to install an experimental plant that is expected to later lead to the building of a larger plant.

AMONG THE TECHNICAL MEN

William R. Sonricker, superintendent of the Transcontinental Oil Company's Fort Worth, Tex., refinery, has spent virtually all of his life in the refining business. Born in Cleveland, Ohio, his first contact with the business came before and after school hours when he worked in his father's petrolatum plant, known as the Petrolia Refining Company, at Petrolia, Pa. His education was obtained at the North Washington Academy, North Washington, Pa.

W. R. Sonricker

About 1901, Mr. Sonricker started working for the first time outside his father's plant when he took charge of the filter plant of the Canfield Oil Company, of Coraopolis, Pa. He was later in the employ of the Lake Carriers Oil Company and the Pittsburgh Oil Refining Company, both of Coraopolis, and worked in Oil City, Pa., for the Empire Oil Works and the Crystal Oil Works.

About 1905, he became associated with F. E. Knoch in the construction and operation of the first complete lubricating plant west of the Mississippi River. It was built for the Great Western Oil Refining Company of Erie, Kans. After the completion of this project, Mr. Sonricker was identified with the construction of the National Refining Company's plant at Coffeyville, Kans., and with the Sunflower State Refining Company at Niotaze, Kans.

From 1910 to 1915, while in the employ of the Carbondale Steel Company, of Carbondale, Pa., he erected paraffin wax plants for the Standard Asphalt & Rubber Company, of Independence, Kans., the Kansas Co-Operative Refining Company, of Chanute, the Muskogee Oil Refining Company, of Muskogee, Okla., and several others in the Mid-Continent.

In 1915, Mr. Sonricker went to the Butler, Pa., plant of the Valvoline Oil Company of New York, as superintendent, where he remained until 1920, when he took charge of the Fort Worth refinery of the Transcontinental Oil Company, his present post. This plant is one of the few complete refineries in the Mid-Continent Field.

DETONATION DIFFERS FROM PREIGNITION

The difference between preignition and detonation in internal combustion engines is explained in an article appearing in the current issue of the Automotive Industries. "Detonation," according to the article, "consists in—or results from—the generation of excessively high pressure in the combustion chamber. That it should be possible for the pressure in the cylinder to reach a value of 1,000 pounds per square inch or more is not surprising, for if we take the heat content of a unit quantity of fuel and calculate the temperature which this amount of heat should impart to the quantity of mixture corresponding to this amount of fuel, on the basis of the average specific heat of the products of combustion, we reach a figure very much higher than any temperature ever measured in an engine in normal operation. This higher temperature corresponds also to a much higher pressure than that normally obtained on explosion.

"In order that the liberation of the heat may cause the maximum increase in the temperature and pressure of the charge, it is not sufficient that combustion be initiated (ignition effected) at an early period in the cycle, but it is also necessary that the combustion be completed very rapidly. With a slow-burning mixture combustion might not be completed until the pistion was half way down on the power stroke even though ignition took place some 30 or 40 degrees ahead of top dead center. It is obvious that under these conditions it is impossible to obtain any very high pressure in the cylinder, because at the time the combustion chamber is of minimum volume, when the piston is at the top end of the stroke, only a small fraction of the heat of the fuel has been imparted to the charge. Detonation evidently necessitates both early ignition and a rapid burning charge."

MONTANA SKIMMING PLANT

The Hiline Oil & Refining Co. has been organized in Montana to build a small skimming plant at Havre, Mont. The principal stockholders are Dr. A. S. Aronow and A. A. Husser of Havre. The plant, which will have an initial capacity of 250 bbls., will be in operation within 60 days.

XUM

Oil Securities Quiet and Irregular

Earlier Weakness Followed By Firmer Trend. Northern Pipe Line, New York Transit and Standard of Ohio Acted Best of Standard Group

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York

NEW YORK June 7.—Oil securities were quiet and irregular during the past week, early weakness being followed by a firmer trend. Atlantic Refining, after rising to above 128, dropped under pressure to 116½. Northern Pipe Line, New York Transit and Standard of Ohio acted the best of the Standard group.

Although the bull market in securities appears to have been resumed, temporarily at least, the petroleum stocks as usual have not, as a group, taken part. In a week characterized by heavy buying of railroad stocks, steels and motors, to say nothing of many other groups, oil stocks were consistently sold, despite the strength displayed by them the preceding week.

Of course this may not have any significance. It is often the case that securities move by groups. But it is interesting to note that oil stocks apparently have not changed their status from the speculative viewpoint. Since the bull market started in 1924 oils have proved among the least speculative of all major groups of securities.

During the March collapse of stock prices, oils remained relatively firm, showing comparatively little activity and only small losses.

While the action of the better class of oil securities has been disappointing to many speculators, those who hold them for investment are gratified by their apparent stability and feel the greater security against reckless speculative unloading in time of depression.

Tide Water Associated

The Tide Water Associated Oil Co. declared an initial dividend of 30 cents a share on the common stock (no par) payable August 2 to stockholders of record June 10, and initial dividend of $1.50 on the 6 per cent preferred stock, payable July 1 to stockholders of record June 10.

The Associated Oil Co. has declared an extra dividend of 40 cents a share in addition to the regularly quarterly dividend of 50 cents. The extra is payable July 24 to stockholders of record June 30, and the regular June 25 to stockholders of record June 10.

Transcontinental Oil

The Transcontinental Oil Co. reports for the quarter ended March 31, 1926, profit of $105,474 after interest, depreciation and depletion, equivalent to 66 cents a share earned on $15,750,000 7 per cent preferred stock. This compares with $588,669, equal after preferred dividends to 8 cents a share on 3,682,529 no par shares of common stock outstanding in the first quarter of 1925.

The income account for the quarter ended March 31, 1926, compares with 1925 as follows:

	1926	1925
Gross income	$3,279,879	$4,127,051
Oper. expenses	2,776,295	2,949,080
Operating profit	$ 503,584	$1,177,971
Interest, etc.	144,519	339,302
Profit	$ 359,065	$ 838,669
Dep. and depletion	253,591	250,000
Profit	$ 105,474	$ 588,669

Indian Refining

The Indian Refining Co., Inc., and subsidiaries report for the year ended December 31, 1925, profit of $352,205 after expenses, depreciation, interest, etc., equivalent to $15.33 a share on $2,296,400 outstanding cumulative preferred stock, on which no dividends have been paid since December 31, 1921. Allowing only for the regular 7 per cent cumulative preferred dividend requirements, balance is equal to 24 cents a share (Par $10) on 785,068 shares of common stock. This compares with deficit of $529,540 in 1924, excluding profit of $2,089,945 on the sale of capital assets.

The consolidated income account for 1925 compares with the preceding year as follows:

	1925	1924
Sales	$20,159,928	.....
Costs and expenses	18,810,243	.....
Balance	$ 1,349,685	.....
Other income	102,646	.....
Total income	$ 1,452,331	$ 488,179
Depreciation	751,757	833,832
Interest, etc.	348,369	183,887
Profit	$ 352,205	*$ 529,540
Profit from capital assets sale	.....	2,089,945
Total profit	$ 352,205	$1,560,405
Central Rfg. pfd. div.	.....	11,078
Surplus	$ 352,205	$1,549,327

*Loss.

The consolidated balance sheet of the Indian Refining Co. and subsidiaries as of December 31, 1925, compares with 1924 as follows:

Assets	1925	1924
Cash	$ 485,788	$ 547,888
Accts and notes rec.	1,528,246	1,176,626
Advances	55,667	69,732
Inventories	2,919,375	2,775,076
Securities owned	15,942	81,185
Special deposits	3,626	5,954
Cash in fund	137,788	127,865
*Ref. pipelines, tank cars, etc.	14,245,019	13,088,316
Trade mark	850,000	.....
Deferred charges	412,889	247,565
Total	$20,654,340	$18,120,207
Liabilities		
Preferred stock	$ 2,296,400	$ 2,296,400
Common stock	7,850,680	7,850,680
Accounts payable	2,436,517	1,425,428
Bank loans	1,280,000	650,000
Notes payable	.....	14,218
Const. plant prop.	.....	105,321
Accrued interest	18,400	23,698
Mortgages payable	233,580	138,451
Funded debt	2,012,000	1,275,000
Fed. tax reserves	776,261	846,835
Surplus	3,750,562	3,494,136
Total	$20,654,340	$18,120,207

*After depreciation.

Woodley Petroleum

Gross income of the Woodley Petroleum Co. for the year ended December 31, 1925, was $1,218,281. Operating profit after operating cost, including drilling and lease losses, state taxes and inventory adjustments, etc., but before depreciation and depletion, was $852,850. Current assets were $922,875, against current liabilities of $94,757.

For the quarter ended March 31, 1926, gross income was $300,345. Operating profit after operating cost, including field and overhead expense, but before depreciation and depletion, was $196,658.

Gulf Oil in Venezuela

The Venezuelan Petroleum Co. has leased to Gulf Oil Corp. 4,536 acres owned by it in the Maracaibo Basin, Venezuela. This constitutes the balance of its holdings not already under lease to Gulf Oil and Standard Oil Co. of California.

Producers & Refiners

The consolidated balance sheet of the Producers & Refiners Corp. for the year ending December 31, 1925, follows:

Assets	
Properties	$57,441,378.94
Less reserve for depreciation	6,856,477.49
Total	$50,584,901.45
Investments	2,507,050.69
Deferred charges	177,964.70
Cash	532,644.72
Notes and accounts receivable	1,712,073.95
From affiliated companies	995,665.38
Inventories	2,506,763.94
Inventories of materials	676,043.82
Interest, etc.	24,240.79
Total current assets	$ 6,447,432.59
Total assets	$59,737,349.43
Liabilities	
Common stock	$31,438,969.00
Preferred stock	2,845,350.00
Subsidiary companies	848,641.35
Funded debt	2,871,500.00
Notes payable	10,056,956.87
To affiliated companies	4,271,080.26
Accounts payable	1,156,927.03
Interest, etc.	149,397.67
Total	$15,634,361.82
Reserves for taxes, etc.	71,443.49
Surplus (subject to deduction for depletion)	7,102.76
Total	$59,737,349.43

The consolidated statement of income and surplus follows:

Sales and earnings	$19,283,192.68
Cost of sales	15,223,984.07
Gross earnings	$ 4,059,208.61
Other income	163,786.50
Total earnings	$ 4,222,989.11
Interest, etc.	1,019,243.67
Net earnings	$ 3,203,745.44
For depreciation	1,977,948.20
Net income, before depletion	$ 1,225,797.24
Surplus, January 1, 1925	15,011,236.74
Net income	1,225,797.24
Less: Dividends on Pfd. stock	99,587.25
Surplus, Dec., 31, 1925	$16,147,446.73
Appreciation of developed leaseholds, charged off	10,657,503.18
Sundry losses, and adjustments for prior years, etc.	5,482,840.79
Total	$16,140,343.97
Surplus, Dec. 31, 1925 (subject of deduction for depletion)	$ 7,102.76

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. June 7	Clos. Quot. May 28	1926 High	1926 Low	1925 High	1925 Low	1924 High	1924 Low
Amerada Corp.	..	28½	27⅝	29¼	21⅜	..	..	..	..
Atlantic Ref., com.	100	117½	124¼	128⅝	97	117½	95⅛	140½	78½
Barnsdall "A"	25	25½	26⅜	33½	23½	33½	18⅝	29⅛	14
California Pet., com.	25	32⅛	33	38⅛	30⅝	34⅜	23⅞	29	19⅞
General Petroleum	25	64⅛	65	65⅞	51¼	59	42	45	38⅝
Houston Oil	100	*61	62	72	50¼	85	59	82½	61
Independent Oil & Gas	..	24⅝	25⅛	34	20¼	41⅜	13½	16¼	6⅝
Indian Refining	10	10½	10	13⅜	9½	14¼	5½	7	3⅝
Lago Oil & Trans.	..	23½	23	23⅞	19¼	..	..	..	..
Louisiana Oil	10	16⅜	17	19⅝	12	23⅜	13⅜	..	..
Maracaibo	..	22½	22½	28⅞	20⅜	35½	20⅜	37¼	25⅝
Marland	..	57⅜	57½	60¼	49¼	60⅛	32⅝	42	29
Mexican Seaboard	..	7¾	8½	12⅛	6	22½	9	25⅝	14⅛
Mid-Continent Pet.	..	32	32⅞	41	25⅝	38	25⅜	40⅛	22⅝
National Supply	50	60	60	65⅞	55½	71	54⅞	72½	54
Oil Well Supply	25	*30½	30½	36	30½	38	33⅜	..	..
Pan. Amer. P. & T., com.	50	70⅞	71⅝	76½	56⅛	83⅞	59⅛	65	44½
Pan. Amer., Western B.	..	37¼	38½	46	34	49⅜	37¼	..	..
Phillips Pet.	..	45½	46¼	45⅛	42⅛	47⅛	36¼	42¼	28½
Producers & Refiners	50	*13	14⅞	17½	11	32⅝	12½	43½	29⅝
Pure Oil, com.	..	27⅜	28¼	31	26	33⅜	25½	30¼	20
Royal Dutch, N. Y., sh.	13.40	53⅝	53½	57⅜	50	57⅞	48¼	59½	40⅜
Shell Transport	10	*45	*45	48⅞	42	49	39⅜	42	33
Shell Union, com.	..	25¼	26¼	28½	24	28⅜	21⅝	22½	15⅜
Simms Pet.	10	19⅝	19⅞	28⅝	20⅜	28½	17⅜	24	10⅜
Sinclair Consolidated, com.	..	22¼	22⅞	24⅞	19⅝	24⅞	17	17½	15
Skelly Oil	25	34¼	34⅞	34⅜	27	32½	21⅜	29	17¼
Standard of California	25	57½	58⅜	62¼	54	67¼	51½	68½	55½
Standard of New Jersey, com.	25	44¼	44¼	46⅝	40¼	47½	38⅝	41½	33
Sun Oil Co.	..	33⅜	*32¼	41⅝	31½	43⅜	38⅛	..	..
The Texas Company	25	52⅞	53⅛	54⅞	49	55	42⅜	45⅝	37⅜
Texas Pacific Coal & Oil	10	14½	14⅝	19½	12⅜	23⅜	11	15¼	8¼
Transcontinental	..	3⅝	3⅜	4⅜	3	5⅜	3½	6¼	3⅜
Union Oil of California	25	43½	44½	49⅝	37¼	43⅝	33⅜	39	35½
Union Tank, com.	100	*93	93½	94	84¼	‡134	118	132⅞	94
White Eagle Oil & Refining	..	27⅝	27⅞	29¾	26¼	31⅝	25⅝	29⅝	23⅛
Standard Oils									
Anglo-American Oil	£1	18⅝	17½	19⅜	16½	26⅜	17½	18⅜	14⅝
Borne Scrymser	100	*225	*225	248	226	240	205	164	150
Buckeye Pipe Line	50	51¼	49½	59½	52	72	53½	85½	51
Chesebrough Mfg. Co.	25	*66½	*65½	72⅜	63	74	48¼	52½	29¼
Continental	10	20½	20⅞	25⅞	19½	31⅛	21⅞	..	..
Crescent Pipe Line	25	*13⅝	*14	16	14½	17½	10	20	11⅜
Cumberland Pipe Line	100	*108	108	137	108	156	128	148	108
Eureka Pipe Line	100	*51	*51	63⅜	47⅜	96	61¼	105	74
Galena Signal, com.	100	*20	20½	32½	17¼	68½	23½	69⅜	62½
Humble Oil & Refining Co.	25	65	66⅜	68¼	52	99	42½	43⅜	36
Illinois Pipe Line	100	132	133	144	134½	154½	124	161	123
Imperial Oil, Ltd	....	36¼	36⅞	38⅜	32½	39¼	27¼	119	99
Indiana Pipe Line	50	*65½	*64	67	58	84	57⅛	100	66
International Pet. Co.	10	34	35	35¼	28⅜	35⅜	22¼	24⅜	16⅞
National Transit Co.	12.50	15	*15½	20⅜	15⅜	25½	16½	25⅞	20⅝
New York Transit	100	50	44⅛	50	39	79	50	97	54½
Northern Pipe Line	100	75½	*74	80½	70⅝	88	67½	107½	72
Ohio Oil Co.	25	58⅜	60	67⅜	58	75¼	60	79½	53
Penn.-Mex Fuel	25	18½	*18	23	15	44	19	35⅝	27
Prairie Oil & Gas	25	54½	55	60¼	48	65½	45⅞	269	193
Prairie Pipe Line	100	*124	125	127	122½	129⅝	105	111	100
Solar Refining Co.	100	*190	*194	212	191	259	200	240	170
South Penn Oil	25	38	38	50	37½	‡197	139	176	117
Southwest Pa. Line	100	*49	*50	54½	47½	84	50	89	68
Southern Pipe Line	10	*68	69¾	74½	61½	103	63	100	80½
Standard of Indiana	10	64½	64¾	70½	61⅝	70⅜	59½	69⅝	54¼
Standard of Kansas	25	26⅞	27⅝	36½	25	46	30¼	50½	32½
Standard of Kentucky	25	120	121	134⅝	108	137	114⅝	121⅝	101
Standard of Nebraska	100	49¼	50	†51⅓	†42	270	231	262	198
Standard of New York	25	32⅝	33⅛	47¼	31⅝	48⅝	40	48	37⅜
Standard of Ohio, com.	100	*308	301	362	292½	369	338	337½	277
Swan & Finch, com.	25	*16	*16	21	18	27	12	28	20
Vacuum Oil	25	101½	103½	109⅜	94⅛	109½	80½	83½	60½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	87	86	93⅝	82½	98⅛	63½	67⅝	56
Tide Water Associated	..	24⅝	24½	27	21	..	..	..	..

*Bid, no sales. ‡Old stocks. †New stocks.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

June 7	58.92	May 3	57.23	Mar. 29	56.18
May 28	59.81	Apr. 26	57.39	Mar. 22	56.96
May 24	58.84	Apr. 19	55.63	Mar. 15	56.34
May 17	57.63	Apr. 12	56.07	Mar. 8	55.02
May 10	57.08	Apr. 5	56.78	Mar. 1	55.34

RAILROAD EXPENSE CUT BY LOWER FUEL OIL

The importance of fuel oil prices in their relationship to the total operating costs of railroads is clearly shown in the April report of the Southern Pacific Railway. Lower fuel oil costs, according to the report, was largely responsible for a $750,000 reduction in transportation expenses for the month.

The average per barrel fuel oil cost in April was $1.05. This is 26 per cent less than the average price of $1.43 paid by the railroad in 1925.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	June 8		June 1		May 25	
OKLAHOMA (Group 3)—						
50 52 450 end point	.11¼		.11¼	.11½	.11¼	.11½
56-58 450 end point	.11¼	.11⅜	.11½	.11⅝	.11½	.11⅝
58-60 450 end point	.11⅜	.11½	.11⅝	.11¾	.11⅝	.11¾
58-60 437 end point (U. S. Motor)	.11½	.11¾	.11¾	.12	.11¾	.12
60-62 400 end point	.11⅞	.12	.12	.12¼	.12	.12¼
64-66 375 end point	.12¼	.12½	.12¾	.13	.12¾	.13
68-70 360 end point	.12¾	.13	.13¼	.13½	.13½	.13¾
KANSAS—						
58 60 437 end point (U. S. Motor)	.12		.12¼	.12½	.12¼	.12½
NORTH TEXAS—						
48-50 450 end point (Naphtha)	.11	.11⅛	.11	.11⅛	.11	.11⅛
50-52 450 end point (Naphtha)	.11	.11¼	.11⅛	.11¼	.11⅛	.11¼
56-58 450 end point	.11⅛	.11⅜	.11¼	.11½	.11¼	.11½
58 60 437 end point (U. S. Motor)	.11½	.11⅝	.11¾	.12	.11¾	.11⅞
60-62 400 end point	.11¾	.12	.12	.12⅛	.12	.12¼
64-66 390 end point	.12	.12¼	.12¼	.12⅜	.12¼	.12½
64-66 375 end point	.12¼		.12¾	.12⅞	.12¾	.13⅛
68-70 360 end point	.12⅝	.12⅞	.13	.13¼	.13¼	.13½
NORTH LOUISIANA—						
58-60 437 end point (U. S. Motor)	.12¼	.12½	.12	.12¼	.12¼	.12½
64-66 375 end point	.13	.13¼	.13	.13¼	.13	.13½
ARKANSAS—						
58-60 450 end	.12¼	.12½	.12	.12⅛	.12	.12¼
58 60 437 end point (U. S. Motor)	.12½	.12⅝	.12¼	.12½	.12¼	.12½
64 66 375 end point	.13	.13¼	.13	.13¼	.13	.13¼
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.14½	.14¾	.14¾	.15	.14¾	.15
PENNSYLVANIA—						
52 Naphtha	.13½	.13¾	.13½	.13¾	.12½	.12¾
54 Naphtha	.13¾	.14	.13¾	.14	.12¾	.13
56 Naphtha	.14	.14¼	.14	.14¼	.13¼	.13½
58 Naphtha	.14½	.14¾	.14½	.14¾	.13¾	.14
60 Gasoline	.14¾	.15	.14¾	.15	.14½	.14¾
62 Gasoline	.15	.15¼	.15	.15¼	.15	.15¼
64 Gasoline	.15¼	.15½	.15¼	.15½	.14¾	.15
66 Gasoline	.16	.16¼	.16	.16¼	.16	.16¼
68-70 Gasoline	.18¾	.19	.19½	.20	.19½	.20
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.12½	.13	.12½	.13	.12½	.13
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 end point (Naphtha)	.11¼	.11½	.11⅜	.11½	.11¼	.11⅝
56 58 450 end point	.11½	.11⅝	.11½	.11⅝	.11½	.11⅜
58-60 437 end point (U. S. Motor)	.11¾		.12		.11¾	.12
60-62 400 end point	.12	.12⅛	.12¼	.12½	.12½	.12¾
64-66 375 end point	.12½		.12¾	.13	.13	.13¼
68-70 360 end point	.13	.13⅛	.13¼	.13½	.13½	.14

*Colorado points.

NATURAL GASOLINE

	June 8		June 1		May 25	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.09¾	.09⅞	.10¼	.10⅜	.10½	.10⅝
Grade A, 72-79.9, 375 e.p., rec. 90%	.09¾	.10	.10¼	.10⅜	.10½	.10⅝
Grade BB, 84-92, 375 e.p., rec. 85%	.09½		.10	.10¼	.10¼	.10⅜
Grade B, 76 83.9, 375 e.p., rec. 85%	.09½		.10	.10¼	.10¼	.10⅜
Grade C. 80 90, 375 e.p., rec. 78%	.09¼	.09½	.09¾		.09¾	.10
NORTH TEXAS—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.09¾	.09⅞	.10¼	.10⅜	.10½	
Grade A, 72 79.9, 375 e p., rec. 90%	.09¾	.09⅞	.10¼	.10⅜	.10½	
Grade BB, 84-92, 375 e.p., rec. 85%	.09½	.09⅝	.10	.10¼	.10¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.09½	.09⅝	.10	.10¼	.10¼	
Grade C. 80 90, 375 e.p., rec. 78%	.09½		.09⅝	.09¾	.09⅞	.10
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.10¾	.11	.10¾	.11	.11	.11¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.10¼	.10½	.10½	.10¾	.10½	.10¾
Grade C. 80 90, 375 e.p., rec. 78%	.10⅜	.10½	.10¼	.10½	.10¼	.10½
CALIFORNIA—						
78-85 absorption, 360-390 end point	.15½	.16	.15½	.16	.15½	.16
78-84 compression, 350 end point	.15½	.16	.15½	.16	.15½	.16
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.09⅞	.10	.10¼	.10½	.10¾	.11
Grade A, 72 79.9, 375 e.p., rec. 90%	.09⅞	.10	.10¼	.10½	.10¾	.11
Grade BB, 84-92, 375 e p., rec. 85%	.09½	.09¾	.10	.10¼	.10¼	.10½
Grade B, 76-83.9, 375 e.p., rec. 85%	.09½	.09¾	.10	.10¼	.10¼	.10½
Grade C, 80-90, 375 e.p., rec. 78%	.09½		.09¾	.10	.10	.10¼

MOTOR NATURAL GASOLINE (BLENDS)

	June 8		June 1		May 25	
OKLAHOMA (Group 3)—						
60-62 450 end point	.11¼	.11½	.11½	.11⅝	.11½	.11⅝
64-66 437 end point	.11¼	.11½	.11½	.11⅝	.11½	.11⅝
NORTH TEXAS—						
64-66 437 end point	.11¼		.11⅜	.11½	.11½	
PENNSYLVANIA—						
*60-62	.13¾	.14	.13¾	.14	.12¾	.13
*64-66	.14	.14¼	.14	.14¼	.13	.13¼
*66-68	.14	.14¼	.14	.14¼	.13	.13¼
*68-70	.14¼	.14½	.14¼	.14½	.13¼	.13½
CHICAGO DISTRICT (Based on Group 3)—						
60-62 450 end point	.11¼	.11⅝	.11¼	.11⅝	.11¼	.11¾
64-66 437 end point	.11½	.11¾	.11½	.11⅞	.11½	.12

*At Sistersville, W. Va.

BURNING OIL

	June 8		June 1		May 25	
KANSAS—						
41-43 water white Kerosene	.09½		.10⅛	.10¼	.10⅜	.10½
OKLAHOMA (Group 3)—						
41 43 water white Kerosene	.09	.09⅛	.09⅞	.10	.10	
42-44 water white Kerosene	.09¼	.09½	.10⅛	.10⅜	.10¼	.10½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.09½	.09¾	.10	.10¼	.10¼	.10½
ROCKY MOUNTAIN STATES—						
*40-41 water white Kerosene	.12	.12⅛	.12⅞	.13	.13	.13¼
NORTH TEXAS—						
41-43 water white Kerosene	.08⅞	.09	.09½	.09¾	.09⅞	.10
ARKANSAS—						
41-43 water white Kerosene	.09½		.10¼	.10½	.10½	.10¾
PENNSYLVANIA—						
43 Kerosene prime white	.11¾	.12	.12	.12¼	.11¾	.12
45 Kerosene water white	.12	.12¼	.12¼	.12½	.12¼	.12½
46 Kerosene water white	.12½	.12¾	.12¾	.13	.12½	.12¾
47 Kerosene water white	.13	.13¼	.13½	.13¾	.12¾	.13
34 Neutral	.08	.08¼	.08	.08¼	.08	.08¼
34 Sundebloom Neutral	.09	.09¼	.09	.09¼	.09	.09¼
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
300 Mineral Seal	.08½		.08½		.09	.09¼
CALIFORNIA—						
38-40 water white (high burning test)	.07½	.08½	.07½	.08½	.07½	.08½
Engine distillate, 43-45 445 end point	.10¼	.10½	.10¼	.10½	.10¼	.10½
Engine distillate, 42-44 450 end point	10	.10¼	.10	.10¼	.10	.10¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.09	.09¼	.10	.10¼	.10	.10½
42-44 water white Kerosene	.09¼	.09½	.10¼	.10½	.10½	.10¾

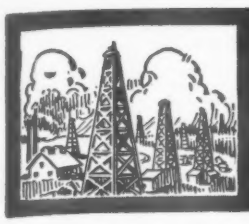
*Colorado points.

FUEL OILS

	June 8		June 1		May 25	
KANSAS—						
24-26 Fuel Oil	1.32½	1.35	1.35		1.35	1.40
32-36 Gas Oil	.04¼	.04⅜	.04¼	.04⅜	.04¼	.04⅜
38-40 Distillate	.04½	.04⅝	.04½	.04⅝	.04½	.04¾
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.22½	1.25	1.22½	1.25	1.22½	1.25
22 26 Fuel Oil (sellers' cars)	1.25		1.25	1.27½	1.25	1.27½
24 26 Fuel Oil (sellers' cars)	1.27½	1 32½	1.27½	1.32½	1.30	1.32½
26-30 Fuel Oil (sellers' cars)	1.32½	1.35	1.35	1.37½	1.35	1.40
28-30 Fuel Oil (sellers' cars)	1.40		1.45		1 45	1.47½
32-36 Gas Oil (cracking stock)	.04	.04⅛	.04⅛	.04¼	.04⅛	.04¼
36-38 Distillate	.04¼	.04⅜	.04¼	.04⅜	.04¼	.04⅜
38-40 Straw Distillate	.04½		.04⅜	.04⅝	.04⅜	.04⅝
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.30		1.30	1.35	1.30	1.35
32-36 Gas Oil (straw)	.03⅞	.04	.03¾	.04	.03¾	.04
38-40 Straw Distillate	.04	.04¼	.04	.04¼	.04	.04¼
NORTH LOUISIANA—						
18-20 Fuel Oil	1.35	1.40	1.25	1.30	1.20	1.25
32-36 Gas Oil	.04¼	.04½	.04	.04¼	.04¼	.04½
36-38 Distillate	.04½	.04¾	.04½	.04¾	.04½	.04¾
ARKANSAS—						
38 40 Distillate	.04⅝	.04¾	.04⅝	.04¾	.04⅝	.04¾
32 36 Gas Oil	.04¼	.04½	.04⅛	.04⅜	.04¼	.04⅜
16-20 Refinery Fuel Oil	1.20	1.25	1.17½	1.20	1.20	
GULF COAST (South Texas)—						
Gas Oil	.05½	.05¾	.05½	.05¾	.05½	.05¾
Fuel Oil	1.75	1.85	1.75	1.85	1.75	1.85
PENNSYLVANIA—						
30-34 Fuel Oil	.06¼	.06½	.06¼	.06½	.06¼	.06½
36-40 Fuel Oil	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
33-35 Distillate	.04¾	.05	.04¾	.05	.04¾	.05
27-35 Distillate	.04	.04½	.04	.04½	.04	.04½
15-20 Fuel Oil (at tide water)	1.00	1.04	1.00	1.04	1.00	1.04
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	1.30	1.35	1.30	1.35	1.32½	1 35
22-26 Fuel Oil (sellers' cars)	1.25	1.30	1.27½	1.30	1.27½	1.30
18-22 (El Dorado)	1.20	1.25	1.25	1.27½	1.20	1.25
18-20 (Smackover)	1.20		1.20	1 22½	1.15	1.20
32-36 Gas Oil	.04	.04⅛	.04	.04¼	.04¼	.04⅜
36-38 Distillate	.04¼	.04½	.04¼	.04¾	.04¼	.04½
38-40 Straw Distillate	.04½	.04¾	.04⅜	.04½	.04½	.04¾

LUBRICATING OILS AND WAX

	June 8		June 1		May 25	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20-25 cold test	.06	.07	.06	.07	.06	.07
100 vis., 3 color, 20-25 cold test	.06½	.07	.06½	.07	.06½	.07
100 vis., 2 color, 20-25 cold test	.07	.07½	.07	.07½	.07	.07½
150 vis., 4 color, 20-25 cold test	.09¼	.09¾	.09¼	.09¾	.09¼	.09¾
150 vis., 3 color, 20-25 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 4 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
180 vis., 3 color, 23-28 cold test	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 4 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis , 3 color, 23-28 cold test	.11¼	.11½	.11¼	.11½	.11¼	.11½
220 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
220 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 3 color, 25 30 cold test	.14½	.15	.14½	.15	.14½	.15
280 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis , 3 color, 25 30 cold test	.16½	.17	.16½	.17	.16½	.17
180 vis., 5 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11¼
220 vis., 5 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 5 color, 25 30 cold test	.13	.14	.13	.14	.13	.14
280 vis., 5 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Cylinder Stocks:						
180-200 vis , S. R. green, 40-45 cold test	.08½	.11	.08½	.11	.08½	.11
190-200 vis., S. R. green, 40-45 cold test	.08	.08½	.08	.08½	.08	.08½
170-190 dark green, 40-45 cold test	.06	.06½	.06	.06½	.06	.06½
190 200 vis. @ 210 "D" Bright Stock	.33	.35	.33	.35	.33	.35
200-210 vis. @ 210 "E" Bright Stock	.30	.31	.30	.31	.30	.31
150 vis. @ 210 "E" Bright Stock	.27	.28	.27	.28	.27	.28
150 vis. @ 210 "D" Bright Stock	.28	.31	.28	.31	.28	.31
Waxes:						
122 124 White Crude Scale Wax	.04¾		.04¾	.04⅞	.04¾	.04⅞
PENNSYLVANIA—						
150, 3 color	.25½		.25½		.25½	
180, 3 color	.28½		.27½		.27½	
200, 3 color	.30½		.29½		.29½	
220, 3 color	.30		.30		.30	
600, steam refined	.15¾		.15¾		.15¾	
635, steam refined	.20		.20		.19½	
650, steam refined	.21		.21		.20½	



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

600, Pennsylvania flash	.26½		.26½		.25½	
630, Pennsylvania flash	.34		.34		.34	
*550, E filtered	.19½		.19½		.19½	
600, E filtered	.20¼		.20¼		.20	
*600, E filtered	.21¼		.21¼		.21¼	
600, D filtered	.26¾		.26¾		.26¾	
550, E filtered	.18½	.18¾	.18½	.18¾	.18½	.18¾
550, D filtered	.22¼	.22½	.22¼	.22½	.22¼	.22½
Pennsylvania Bright Stock	.40		.40		.40	
122-124 White Crude Scale Wax	.05⅛	.05¼	.05⅛	.05¼	.05⅛	.05¼
†124-126 White Crude Scale Wax	.05¼	.05⅜	.05¼	.05⅜	.05¼	.05⅜

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.08	.08½	.08	.08½	.08	.08½
No. 3 color, 200 vis., pale oil	.12	.12½	.12	.12½	.12	.12½
No. 3½ color, 300 vis., pale oil	.13½	.14	.13½	.14	.13½	.14
No. 3¾ color, 500 vis., pale oil	.15½	.16	.15½	.16	.15½	.16
No. 4 color, 750 vis., pale oil	.19½	.20½	.19½	.20½	.19½	.20½
No. 2 plus color, 200 vis., pale filtered	.22		.22		.22	
No. 2 color, 300 vis., pale filtered	.25		.25		.25	
No. 2½ color, 500 vis., pale filtered	.28		.28		.28	
No. 2½ color, 750 vis., pale filtered	.36		.36		.36	
No. 5 to 6 color, 200 vis., red oil	.10	.10½	.10	.10½	.10	.10½
No. 5 to 6 color, 300 vis., red oil	.12	.12½	.12	.12½	.12	.12½
No. 5 to 6 color, 500 vis., red oil	.13½	.14	.13½	.14	.13½	.14
No. 5 to 6 color, 750 vis., red oil	.17½	.18½	.17½	.18½	.17½	.18½
CALIFORNIA—						
130 pale, 2½-3 color	.10	.11½	.10	.11½	.10	.11½
200 vis., 2½-3 color	.13½	.14½	.13½	.14½	.13½	.14½
300 vis., 3 -3½ color	.15	.16	.15	.16	.15	.16
350 vis., 3½-4 color	.16½	.17½	.16½	.17½	.16½	.17½
400 vis., 3½-4 color	.18	.19	.18	.19	.18	.19
Red Neutrals:						
200 vis., 4½-5 color	.12	.13	.12	.13	.12	.13
300 vis., 5 -6 color	.13	.14	.13	.14	.13	.14
400 vis., 5 -6 color	.15	.16	.15	.16	.15	.16
500 vis., 4½-5 color	.18	.19	.18	.19	.18	.19
500 vis., 6 -6½ color	.16	.17	.16	.17	.16	.17
600 vis., 6½ plus color	.17	.18	.17	.18	.17	.18

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

Gasoline:	June 8	June 1	May 25
U. S. Motor, 58-60	.15	.15	.15
Export, 64-66	.17	.17	.17
Kerosene, prime white	.09⅛	.09¼	.09¼
*Bunker Oil, 14-16, per bbl.	1.75	1.75	1.75
*Diesel Oil, 28-30, per bbl.	2.50	2.41½	2.41½
Gas Oil, 28 plus	.06½	.06½	.06½
Cylinder Oil, light filtered, 600 s.r.	.29	.29	.29
Bright Stock, No. 5, 150 vis. at 212 F.	.41	.41	.40
White Neutral, No. 1, 170 vis., 1 color	.37	.37	.35
Pale Oil, "25," 170 vis., 3½ color	.13	.13	.12
Pale Oil, "28," 100 vis., 2 color	.08	.08	.07½
Red Oil:			
No. 3, 160 vis., 7 color	.11	.11	.10¾
No. 2, 212 vis., 5½ color	.12	.12	.11½
No. 1, 265 vis., 5½ color	.13½	.13½	.13
Polar, 295 vis., 6 color	.14	.14	.13½
Paraffin Wax, refined:			
120-122 a.m.p., per lb.	.06	.06	.05⅞
125-127 a.m.p., per lb.	.06⅛	.06⅛	.06
130-132 a.m.p., per lb.	.06½	.06½	.06⅛
135-137 a.m.p., per lb.	.07	.07	.06⅞
Petrolatum, in bbls., per lb.:			
Amber	.03⅛	.03¼	.03¼
Light amber	.03½	.03½	.03½
Cream	.05½	.05½	.05½
Lily white	.07¾	.08	.08
Snow white	.08¾	.09¼	.09¼

*Lighterage 6.5c a barrel extra.

NEW YORK CASE EXPORT PRICES

	June 8	June 1	May 25
Gasoline, U. S. Motor, 58-60	.29.40	.29.40	.29.40
Kerosene:			
Standard white	.19.40	.19.15	.19.15
Water white	.20.40	.20.40	.20.40

LOS ANGELES EXPORT PRICES

	June 8		June 1		May 25	
Kerosene water white	.05½	.06½	.05½	.06½	.05½	.06½
U. S. Motor Gasoline, 54-56 437 e.p.	.11	.11¼	.11	.11¼	.11	.11¼

CRUDE OIL PRICES

OKLAHOMA, KANSAS AND NORTH TEXAS

***Prairie Oil & Gas Co.**
(Oklahoma, Kansas and North and East Central Texas)

28° to 28.9°	$1.65
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° to 37.9°	2.37
38° to 38.9°	2.45
39° to 39.9°	2.53
40° to 40.9°	2.61
41° to 41.9°	2.69
42° to 42.9°	2.77
43° to 43.9°	2.85
44° to 44.9°	2.93
45° to 45.9°	3.01
46° to 46.9°	3.09
47° to 47.9°	3.17
48° to 48.9°	3.25
49° to 49.9°	3.33
50° to 50.9°	3.41
51° to 51.9°	3.49
52° and above	3.57

*Other major purchasers except as noted below.

Champlin Refining Co.
(Garber and Tonkawa)
Schedule based on Prairie Oil & Gas Co. paying 10 cents additional for each grade of crude above 38° gravity.

Humble Oil & Refining Co.
(North and East Central Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Big Lake and Lytton Springs)
Same prices as Prairie Oil & Gas Co. schedule.

Magnolia Petroleum Co.
(Oklahoma, Kansas and North and East Central Texas, except Corsicana heavy, and Lytton Springs of South Central Texas)

Below 28°	1.30

Other grades same as Prairie Oil & Gas Co.

Iatan	$1.15
Corsicana heavy	1.25
(Panola County)	
34° to 34.9°	$1.95
35° to 37.9°	2.10
38° and above	2.25

Texhoma Oil & Refining Co.
(Wichita Falls, Tex., District)

Below 32°	1.94
32° to 32.9°	2.02
33° to 33.9°	2.10
34° to 34.9°	2.18
35° to 35.9°	2.26
36° to 36.9°	2.34
37° to 37.9°	2.42
38° to 38.9°	2.50
39° to 39.9°	2.60
40° to 40.9°	2.66
41° to 41.9°	2.74
42° to 42.9°	2.82
43° to 43.9°	2.90
44° and above	2.98

TEXAS PANHANDLE

Kay County Gas Co.
Magnolia Petroleum Co.

28° to 28.9°	$1.35
29° to 29.9°	1.40
30° to 30.9°	1.45
31° to 31.9°	1.50
32° to 32.9°	1.55
33° to 33.9°	1.60
34° to 34.9°	1.65
35° to 35.9°	1.70
36° to 36.9°	1.75
37° to 37.9°	1.80
38° to 38.9°	1.85
39° and above	1.90

GULF COAST

***Humble Oil & Refining Co.**

Grade A	$1.60
Grade B—	
Below 25°	1.50
25° to 25.9°	1.55
26° to 26.9°	1.60
27° to 27.9°	1.65
28° to 28.9°	1.70
29° to 29.9	1.75
30° to 30.9°	1.80
31° to 31.9°	1.85
32° to 32.9°	1.90
33° to 33.9°	1.95
34° to 34.9°	2.00
35° and above	2.05
Sour Lake (36° gravity) (The Texas Company)	1.79
Boling	1.50
High Island (The Sun Co.)	1.40

The Texas Company

Grade A	$1.60
Grade B	1.50
†Light crude—	
35° to 35.9°	2.05
36° to 36.9°	2.10
37° to 37.9°	2 15
38° to 38.9°	2.20
39° to 39.9°	2.25
40° and above	2.30

†The Texas Company's postings on light crude under 35° gravity are same as Humble Oil & Refining Co.'s grades and prices for Grade B crude.

*The Sun Pipe Line Co.'s postings same as Humble's.

SOUTH CENTRAL AND SOUTHWEST TEXAS

***Magnolia Petroleum Co.**

Luling (contract)	$1.30
Mirando (Webb, Jim Hogg and Zapata Counties)	1.25
Rockdale-Minerva (Milam County)	1.25
Thrall	1.00
Calliham (Live Oak and McMullen Counties)	1.75
‡Lockhart (Lytton Springs)	
Somerset (Grayburg Pipe Line Co.)	
28° to 28.9°	1.25
29° to 29.9°	1.35
30° to 30.9°	1.71
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.20
36° to 36.9°	2.29
37° to 37.9°	2.37
38° and above	2.45

*Texpata Pipe Line Co. and Humble Pipe Line Co. also posts in Mirando Field paying same prices as Magnolia Petroleum Co.

‡Lockhart prices same as for North and East Central Texas. Lockhart posted by Magnolia Petroleum Co. and Humble Oil & Refining Co.

ARKANSAS AND NORTH LOUISIANA

Standard Oil Co. of Louisiana

Caddo below 32°	2.10
32° to 34.9°	2.25
35° to 37.9°	2.35
38° and above	2.45
Homer Below 31°	1.85
31° to 32.9°	2.00
33° to 34.9°	2.10
35° and above	2.20
Haynesville below 33°	2.00
33° and above	2.10
El Dorado below 33°	2.00
33° to 34.9°	2.10
35° to 36.9°	2.20
37° and above	2.30
Bull Bayou, 32° to 34.9°	1.95
35° to 37.9°	2.10
38° and above	2.25
Cotton Valley	1.20
DeSoto	2.30
Crichton	2.10
Bellevue	1.50
Smackover, below 24°	1.10
24° to 24.9°	1.35
25° to 25.9°	1.40
26° to 26.9°	1.45
27° and above	1.50
*Stephens, Ark, below 26°	1.45
26° and above	1.65
†Calion (East El Dorado)	.95
§Urania	1.15

Other companies posting in these fields are: Gulf Pipe Line Co.; Atlantic Oil Producing Co. in Homer, Haynesville, El Dorado and Smackover; The Texas Company in Caddo, Bull Bayou, DeSoto, Crichton and Smackover.

*Posted by the Atlantic Oil Producing Co. †Posted by the Gulf Pipe Line Co. §Posted by the Louisiana Oil Refininig Corp.

ROCKY MOUNTAIN STATES

Ohio Oil Co.—Midwest Refining Co.

Rock Creek, (Wyo.)	$2.25
Salt Creek—	
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° and above	2.37
Big Muddy	2.25
Mule Creek	1.75
Grass Creek, light	2.40
Grass Creek, heavy	.90
Elk Basin	2.40
Lance Creek	2.40
Rex Lake	1.45
Osage	2.40
Lost Soldier (contract)	1.35
Greybull-Torchlight	2.15
Hamilton Dome	1.35
Cat Creek (Mont.)	2.40
Sunburst (Mont.)	1.05
Florence (Colo.)	1.60
Artesia	1.95
Hogback (N. M.)	2.45

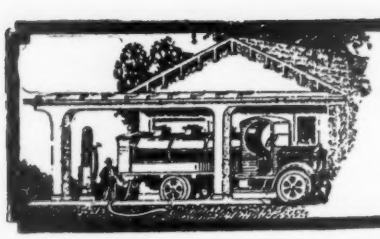
Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency

Penna Grade Oil in New York Tran-

(Continued on Page 128)



TANK WAGON MARKETS

Tankwagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, June 8.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Chicago Dist.—				
†Less than 100 gals.	19.0	21.0	...	15.5

Tank wagon prices on April 19, 1922; g. up 1¼c; May 8, up 1c; June 27, g. and k. up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 20, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c, k. up 1c; April 19, g. down 1c; July 14, g. up 1c; Aug. 25, g. down 2c, k. down 1c; Sept. 1, g. down 1c; Feb. 4, 1926, g. up 1c, k. up 1c; April 16, 1926, k. up 1c; April 24, 1926, k. up ½c; April 29, 1926, g. up 1c, k. up ½c; May 6, 1926, k. up ½c May 17, g. and k. up 1c.

Decatur, Ill.	19.2	21.2	...	16.0
East St. Louis	18.1	20.35	...	15.1
Joliet	19.4	21.4	...	16.2
Peoria	19.2	21.2	...	16.0
Quincy	19.2	21.2	...	15.8
Davenport, Ia.	21.5	23.5	2.0	16.4
Des Moines	21.5	23.5	2.0	16.4
Keokuk	21.5	23.5	2.0	16.4
Sioux City	21.0	23.0	2.0	16.0
Duluth, Minn.	22.5	24.5	2.0	17.1
Minneapolis	22.2	24.2	2.0	17.1
La Crosse, Wis.	22.2	24.2	2.0	16.9
Milwaukee	21.1	23.1	2.0	15.8
Madison	21.3	23.3	2.0	16.0
Detroit, Mich.	21.8	23.8	2.0	16.7
Grand Rapids	21.7	23.7	2.0	16.6
Saginaw	21.9	23.9	2.0	16.8
Evansville, Ind.	22.0	24.0	3.0	16.6
Fort Wayne	22.4	24.4	3.0	16.4
Indianapolis	22.2	24.2	3.0	16.2
South Bend	22.4	24.4	3.0	16.4
Fargo, N. D.	22.9	24.9	1.0	19.1
Huron, S. D.	23.5	25.5	3.0	17.6
Sioux Falls	22.3	24.3	3.0	17.1
*K. C. Mo.	21.9	23.9	3.0	14.8
*Springfield	21.8	23.8	3.0	15.7
*St. Louis	20.6	22.9	2.5	15.5
*St. Joseph	21.0	23.0	2.5	15.4
‡Wichita, Kan.	19.8	21.8	2.0	15.4
Bartlesville, Ok.	20.8	22.8	3.0	15.3

*State tax is 2c. Remainder is city tax.

†Quantity price on more than 100 gallons, 18.0.

‡At all Kansas points a discount of 1 cent a gallon is allowed from the tank wagon postings on dumps of 50 gallons or more.

The following monthly rebate system is effective on tank wagon schedules throughout the territory of Standard Oil Co. of Indiana: Over 750 gallons, ½c; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1¼ cents; over 10,000 gallons, 2 cents. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

SOUTHWESTERN DISTRICT

***Magnolia Petroleum Co.**

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Dallas, Tex.	20.0	1.0		15.0
Fort Worth	20.0	1.0		15.0
Houston	20.0	1.0		15.0
San Antonio	20.0	1.0		15.0
El Paso	21.0	1.0		16.0
Texarkana, Tex.	**20.5**	1.0		15.0
Muskogee, Ok.	20.0	23.0	3.0	16.0
Oklahoma City	20.0	23.0	3.0	16.0
Tulsa	20.0	24.0	3.0	16.0
Little Rock	22.0	25.0	4.0	16.5
Ft. Smith, Ark.	22.0	25.0	4.0	16.5

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, ½ cent; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1¼ cents; over 400 gallons, 1½ cents; over 500 gallons, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases as in the tank wagon discounts.

In Texas a flat 3-cent discount only from the retail schedule is allowed dealers and large consumers. There is no tankwagon schedule.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*New Orleans	20.5	23.5	3.0	15.0
Alexandria	20.0	23.0	2.0	16.0
Baton Rouge	19.0	22.0	2.0	14.5
LaFayette	20.0	23.0	2.0	15.5
Lake Charles	20.5	23.5	2.0	16.0
Shreveport, La.	19.0	22.0	2.0	15.0
Memphis, Tenn.	21.5	24.5	3.0	17.0
Chattanooga	23.5	26.5	3.0	17.5
Knoxville	23.5	26.5	3.0	18.0
Nashville	22.5	25.5	3.0	18.0
Bristol	24.0	27.0	3.0	17.5
Little Rock, Ark	22.0	25.0	4.0	16.5

*Tax of 3 cents includes city tax of 1 cent.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlanta, Ga.	25.0	28.0	3.5	20.0
Augusta	25.0	28.0	3.5	20.0
Macon	25.0	28.0	3.5	20.0
Savannah	23.0	25.0	3.5	18.0
Birm'gham, Ala	22.0	25.0	2.0	19.5
Mobile	21.0	24.0	2.0	18.0
*Montgomery	23.0	26.0	3.0	20.5
Clarksdale, Miss	23.0	26.0	4.0	17.5
Jackson	23.0	26.0	4.0	16.5
Natchez	22.5	25.5	4.0	17.0
Vicksburg	22.5	25.5	4.0	17.0
Jack'ville, Fla.	23.0	26.0	4.0	18.0
Miami	25.0	28.0	4.0	19.5
Pensacola	23.0	25.0	4.0	18.5
Tampa	23.0	26.0	4.0	18.0
Covington	24.0	27.0	5.0	19.0
Louisville	25.0	28.0	5.0	18.0
Lexington, Ky.	25.0	28.0	5.0	19.0

*In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene. Prices in Georgia include ⅛ cent inspection fee on gasoline and kerosene; in Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of ⅛ cent on kerosene only.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlantic City	19.0	...	...	16.0
Newark, N. J.	19.0	21.0	...	16.0
Anapolis, Md.	21.0	...	2.0	16.0
Baltimore	21.0	24.0	2.0	16.0
Cumberland	21.0	24.0	2.0	16.0
Washington	21.0	24.0	2.0	16.0
Danville, Va.	23.5	....	4.5	16.0
Norfolk	23.5	26.5	4.5	16.0
Petersburg	23.5	26.5	4.5	16.0
Roanoke	23.5	26.5	4.5	16.0
Richmond	23.5	26.5	4.5	16.0
Charleston, W. Va.	22.5	25.5	3.5	16.0
Keyser	22.5	....	3.5	16.0
Parkersburg	22.5	25.5	3.5	16.0
Wheeling	22.5	25.5	3.5	16.0
Charlotte, N. C.	23.5	26.5	4.0	16.0
Hickory	23.5	....	4.0	16.0
Mt. Airy	23.5	26.5	4.0	16.0
Salisbury	23.5	26.5	4.0	16.0
Charleston, S.C.	24.5	27.5	5.0	16.0
Columbia	24.5	27.5	5.0	16.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Albany, N. Y.	21.0	....	...	17.0
*New York	21.0	....	...	17.0
Buffalo	21.0	....	...	17.0
Rochester	21.0	....	...	17.0
Syracuse	21.0	....	...	17.0
Boston, Mass.	21.0	....		17.0
Providence, R.I.	22.0	....	1.0	17.0
Augusta, Me.	24.0	....	3.0	17.0
Manchester, N. H.	23.0	....	2.0	17.0
Burlington, Vt.	23.0	....	2.0	17.0

*Price in steel barrels.

Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*Pittsburgh, Pa.	20.0	25.0	...	17.0
*Philadelphia	20.0	25.0	...	17.0
*Scranton	20.0	25.0	...	17.0
*Allentown	20.0	25.0	...	17.0
Altoona	20.0	25.0	...	17.0
*Erie	20.0	25.0	...	17.0
Dover, Del.	22.0	25.0	2.0	17.0
Wilmington	22.0	25.0	2.0	17.0
Springf'd, Mass.	21.0	23.0	...	17.0
Worcester	21.0	24.0	...	17.0
Boston	21.0	24.0	...	17.0
Providence, R.I.	22.0	24.0	1.0	17.0
Hartford, Conn.	23.0	26.0	2.0	16.0
New Haven	23.0	26.0	2.0	17.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
San Francisco	18.0	22.0	2.0	15.5
Los Angeles	16.5	20.5	2.0	15.5
Fresno	18.5	22.5	2.0	17.5
Reno, Nev.	23.5	27.5	4.0	19.0
Portland, Ore.	19.0	23.0	3.0	16.5
Seattle, Wash.	18.0	22.0	3.0	16.5
Spokane	22.0	26.0	3.0	20.5
Tacoma	18.0	22.0	3.0	16.5
Phoenix, Ariz.	25.0	28.0	3.0	21.5

CALIFORNIA

***Standard Oil Co.-Union Oil Co.**

Gravity—	Long Beach Huntington Beach Richfield Brea-Olinda Rosecrans-Dom'guez Torrance-Inglewood	Whittier La Habra Montebello	Kern River Newhall-McKittrick Midway-Sunset Elk Hills Lost Hills Belridge	Coyote	Santa Fe Springs	Coalinga	Wheeler Ridge	Santa Maria Ventura Salt Lake
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.87	.86	.75	.85	....	.75	.75	.85
16°	.90	.86	.75	.85	....	.75	.75	.85
17°	.94	.86	.76	.85	....	.75	.75	.85
18°	.98	.86	.75	.86	....	.75	.75	.85
19°	1.04	.87	.75	.87	....	.75	.75	.85
20°	1.10	.89	.82	.90	.89	.79	.78	.90
21°	1.16	.91	.90	.98	.91	.86	.81	.97
22°	1.22	.94	1.00	1.06	.94	.93	.85	1.04
23°	1.28	.97	1.11	1.14	.97	1.00	.89	1.11
24°	1.34	1.01	1.22	1.22	1.02	1.07	.93	1.19
25°	1.40	1.06	1.33	1.30	1.08	1.14	.97	1.25
26°	1.46	1.09	1.44	1.38	1.16	1.21	1.01	1.32
27°	1.52	1.13	1.55	1.46	1.24	1.28	1.05	1.39
28°	1.58	1.17	1.66	1.54	1.32	1.35	....	1.46
29°	1.64	1.21	1.77	1.62	1.40	1.42	....	1.53
30°	1.70	1.25	1.88	1.70	1.48	1.49	....	1.60
31°	1.76	....	1.99	....	1.60	1.56	....	1.67
32°	1.84	....	2.10	....	1.72	1.63	....	1.73
33°	1.92	....	2.21	....	1.84	1.70	....	1.79
34°	2.00	....	2.32	....	1.96	1.77	....	1.85
35°	2.08	....	....	....	2.08	1.84	....	1.92
36°	2.16	....	....	....	2.16	....	....	....
37°	2.24	....	....	....	2.24	....	....	....
38°	2.24	....	....	....	2.24	....	....	....
39°	2.44	....	....	....	2.44	....	....	....
40°	2.54	....	....	....	....	....	....	....
41°	2.64	....	....	....	....	....	....	....
42°	2.74	....	....	....	....	....	....	....

*Column 2—Long Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Brea-Olinda, 14 to 30 degrees; Terrance and Inglewood, 14 to 28; Dominguez, 34 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 3—Whittier and La Habra crudes, 14 to 32 degrees; Montebello, 14 to 30 degrees.

Column 4—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset and Elk Hills, 14 to 32 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 6—Santa Fe Springs. Only Union Oil Co. posts below 24 degrees.

Column 9—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura, 14 to 35 degrees. Posted only by Union Oil Co.

OHIO

Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
All Ohio points	22.0	24.0	2.0	17.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Omaha	21.25	23.25	2.0	16.0
McCook	22.75	24.75	2.0	17.5
Norfolk	21.75	23.75	2.0	16.5
North Platte	22.75	24.75	2.0	17.25
Scottsbuff	22.25	24.25	2.0	16.75

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Denver, Colo.	22.0	25.0	2.0	19.0
Pueblo	22.0	24.0	2.0	19.0
Casper, Wyo.	23.5	24.5	2.5	17.5
Cheyenne	23.5	25.5	2.5	19.0
Butte, Mont.	24.0	24.0	2.0	21.0
Helena	26.0	28.0	3.0	21.0
Salt Lake, Utah	26.0	28.0	3.5	19.0
Boise, Idaho	27.0	29.0	3.0	21.0
Albuquerque, N. Mex.	29.5	29.5	3.0	21.0

TANKWAGON PRICE CHANGES

June 4—Standard Oil Co. of Louisiana advanced tankwagon and service station prices of gasoline 1 cent throughout its territory.

CRUDE PRICE CHANGES

JUNE 8.—The Texas Company revised its Gulf Coast crude schedule including an advance of from 5 to 25 cents on the lighter grades. The new schedule is shown in the regular crude price tables.

CHICAGO MARKETERS MEET

CHICAGO, June 8.—Twenty-one of the leading marketers of petroleum products met at the Auditorium Hotel at noon today and planned to hold noon lunches every two weeks for better acquaintance and harmony. There will be no formal organization at present. Discussions will be confined to matters of general trade interest, today's subject being credits. Al Stewart, of the Refiners Petroleum Co. called this meeting and some marketers will be chosen at each meeting to call and arrange for the next.

CRUDE OIL PRICES

(Continued from Page 127)

sit Lines (New York)	$3.65
Bradford District Oil in National Transit Lines (Pennsylvania)	3.65
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.55
Penna Grade Oil in Southwest Pa. Line Lines (West Virginia)	3.50
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.55
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.30
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	2.40
Corning Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.55
Somerset Medium Oil in Cumberland Pipe Pipe Lines (Kentucky)	2.50
Somerset Light Oil in Cumberland Pipe Line Lines (Kentucky)	2.65
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky)	1.35
Gaines (Pennsylvania)	3.10
Keister (Pennsylvania)	2.45

MIDDLE WESTERN STATES

Ohio Oil Co.

Lima	2.48
Wooster	2.55
Illinois	2.37
Indiana	2.25
Princeton	2.37
Plymouth	1.90
Waterloo	1.35
*Western Kentucky, 32.9° and below	2.10
33° to 35.9°	2.20
36° to 38.9°	2.30
39° and above	2.40
†Cumberland, Barren and Monroe Counties	2.65
§Oil Springs (Canada)	2.95
§Petrolia (Canada)	2.88

*Posted by Indian Refining Co.
†Posted by Paragon Development Co.
§Posted by Imperial Oil Co., Ltd.

MEXICO

*Tuxpam light (f.o.b. Mex. ports)	$1.35
§Panuco heavy (f.o.b. Mex. ports)	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. §17.631c tax.

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NORTH CENTRAL TEXAS

(Continued from Page 40)

at 279-83 feet; No. 2, dry and abandoned at 500 feet; No. 1 Saunders, 20 bbls. at 1,861-69 feet. Magnolia Petroleum Co.'s No. 14 O. C. Beach made 8 bbls. at 1,204-08 and 1,214-18 feet. Dale and others' No. 11 Burnett was dry and abandoned at 1,818 feet, and Hazlett-Simmons' No. 1 Saunders at 1,915 feet. Pace's No. 1 Edgerly, SW cor. Lot 37, Section 1, S. A. & M. G. Survey, produced 12 bbls at 1,396-1,405 feet. The Petroleum Investment Co.'s No. 10 Fisher made 8 bbls. at 1,569-75 feet and No. 18 made 15 bbls. at 1,562-69 feet. Schlaffke's No. 4 Fisher was dry and abandoned at 1,956 feet, having drilled dry sand at 1,621-23 feet. Gulf Production Co.'s No. 5 J. L. Waggoner "D" was dry and plugged at 788 feet.

Wilbarger County

Empire Gas & Fuel Co.'s No. 32 Stepheins, Section 83, Block 14, H. & T. C., pumped 25 bbls. at 1,243-62, 1,327-34 and 1,347-70 feet. Humble Oil & Refining Co.'s No. 45 Stephens, same section, made 50 bbls. of oil and some water at 2,385-2,410 feet; No. 4 Waggoner "K," Section 46, Block 2, bailed 12 bbls. of oil and 15 bbls. of water at 2,386-92 feet but was not completed; No. 2 Waggoner "N" swabbed 100 bbls. in 24 hours from pay at 2,306-20 feet but was also not completed.

Milham corporation's No. 3 Waggoner "B," Section 31, Block 4, was good for 8 bbls. at 2,536-50½ feet. Miller Oil Co.'s No. 1 Waggoner, Section 47, was dry and abandoned at 2,635 feet. Phillips Petroleum Co.'s No. 9 Waggoner "A," Section 42, Block 4, swabbed 246 bbls. at 1,856-81 feet; No. 11 pumped 200 bbls. at 1,832-56 feet; No. 12 was not completed but swabbed 180 bbls. at 1,844½-65 feet; No. 1 Waggoner "T" pumped 72 bbls. at 2,305-38 feet; No. 4 Waggoner "NN," Section 42, pumped 60 bbls. at 2,535-55 feet.

Powers and others' No. 1 Castlebury "B," Section 68, Block 14, was abandoned after spudding 30 feet. Shamrock Oil Co.'s No. 1 Waggoner "B," Section 2, H. & T. C., was dry and abandoned at 2,547 feet. Texhoma Oil & Refining Co. and Parnell & Cline's No. 1 Waggoner was another duster at 2,504 feet. Tidal Oil Co.'s No. 1 Waggoner Lease 3, Section 37, Block 4, pumped 96 bbls. the first 19 hours but was completed for 30 bbls. of oil and 7 bbls. of water at 1,942-56 feet. Waggoner Refining Co.'s No. 2 Waggoner "A" swabbed 300 bbls. at 1,886-1,906 feet but was not completed.

Archer County

Texhoma Oil & Refining Co.'s No. 1 Demgen was dry and abandoned at 1,985 feet. Allday Oil Co.'s No. 1 G. B. Hasson, Block 165, R. Carson Survey, was dry and abandoned at 1,545 feet. L. T. Burns' No. 6 A. P. Jackson, Lot 10, W. B. Aldridge Survey, made 30 bbls. at 1,542-48 feet; No. 7 was dry and abandoned at 1,578 feet and No. 1 A. P. Jackson, McCrory, trustee, was also a failure at 1,650 feet. J. A. Gardner and others' No. 1 A. P. Jackson was dry and plugged at 1,565 feet.

Humble Oil & Refining Co.'s No. 1 A. P. Jackson, NW cor. Lot 145 W. B. Aldridge Survey, was a duster at 1,625 feet; same company's No. 3 A. P. Nichols, Lot 2, Section 33, A. T. N. C. L. Survey, was dry and plugged at 1,670 feet. McCarty Oil Co.'s No. 27 Wilson "B," E. Hall Survey, made 45 bbls. at 880-910 feet. Pandem Oil Corp.'s No. 1 A. D. Britton in the W. Hensley Survey was abandoned as dry at 1,790 feet. Shappell Oil Co.'s (No. 2) No. 4 Wilson "A," Section 25, Lot 13, A. N. T. C. Survey, was dry at 1,645 feet. Shaw and others' No. 5 Wilson "B," SE cor. Lot 400, Section 1, G. H. & H. Survey, made 6 bbls. after a 5-quart shot at 1,367-78 feet, total depth 1,387 feet.

Gulf Production Co.'s No. 3 W. M. Ashworth was a 10-bbl. pumper at 1,215 feet, total depth in shale; No. 3 L. M. Hayter was dry and abandoned at 1,501 feet in shale; No. 1 B. D. Ikard was plugged at 1,105 feet in shale; No. 7 B. R. Jeske pumped 60 bbls. at total depth of 1,179 feet in shale; No. 37 A. P. Nichols pumped 57 bbls. at 1,553 feet in oil sand; No. 38 A. P. Nichols was dry and plugged at 1,565 feet, and No. 8 Power Banking Co. pumped 17½ bbls. at 1,411 feet, gray sand.

Bridwell & Heydrick's No. 2 Hamilton was dry and abandoned at 1,221 feet. Atlantic Oil Producing Co. and others' No. 6 Rachuig "A," Section 4, B. B. B. & C. Survey, pumped 20 bbls. the first 12 hours from sand at 1,163-78 feet. Homer Donohue's No. 2 Andrews, in the E half of Section 1,826, T. E. & L. Survey, was dry and abandoned at 1,000 feet. Golding & Cochran's No. 1 Herron, Section 1,853, was a duster at 1,015 feet. Hines and others' No. 1 Wilhelm, NW cor., Section 2,420, was also dry at 1,501 feet. Humble Oil & Refining Co.'s No. 10 Hamilton made 10 bbls. at 1,167-73 feet.

Maer & Staniforth's No. 1 Meade estate, Section 40, Meade pasture, pumped 77 bbls. the first 11 hours at 1,444-50 feet. Magnolia Petroleum Co.'s No. 2 Little, NE cor. of east 100 acres its tract in Isaac Holman Survey, swabbed 114 bbls. the first 24 hours from sand at 1,271-83 feet. Roxana Petroleum Corp.'s No. 1 Abercrombie, Section 2, Abstract 1,281, S. P. Survey, was a failure at 1,328 feet. Shasta Oil Co.'s No. 1 Meade estate "B" was dry and abandoned at 1,652 feet. The Texas Company's No. 12 Richardson, Section 16, South Anderson ranch subdivision, was plugged at 1,392 feet. Texhoma Oil & Refining Co.'s No. 7 Abercrombie & Taylor, Section 2, S. P. R. R. Survey, made 44 bbls. at 1,357-69 feet; No. 3 Kunkel, SE cor. Block 2, Thomas McCoy Survey, was an 80-bbl. well at 1,156-72 feet. Texhoma Oil & Refining Co. and Republic Production Co.'s No. 4 Oldham, Elisa Hubble Survey, was good for 25 bbls. at 1,304-11 feet. United Producers Co.'s No. 1 Prideaux, J. T. Hand Survey, A-181, made 15 bbls. at 663-80 feet.

Clay County

Lowry Oil Corp.'s No. 2 A. Culbertson made 30 bbls. at 1,785-95 feet.

Montague County

F. H. E. Oil Co.'s No. 5 R. Hinds "A," was good for 110 bbls. at 889-910 feet. Lesh, McCall & Kilcrease's No. 4 R. Hinds, J. J. Wall Survey, was dry and abandoned at 1,071 feet. Texhoma Oil & Refining Co.'s No. 9 Howard and others' "A," John Chambliss Survey, made 50 bbls. of oil and 40 bbls. of water at 1,170-83 feet.

Jack County

Richardson & Markley's No. 1 Spearman was dry and abandoned at 512 feet.

Young County

Bridwell & Heydrick's No. 1 Whitehead was dry and abandoned at 915 feet. J. R. Cole, Jr.'s No. 1 Stewart made 20 bbls. at 541-52 feet. Cosden-Consolidated Oil Co.'s No. 3 Benson, Section 1,391, T. E. & L. Survey, made 43 bbls. at 862-76 feet. Eagle Creek Oil Co.'s No. 2 Cheeves, H. B. Akles Survey, was dry and abandoned at 1,106 feet. Howard, Duffield & Berlin abandoned the location for their No. 2 Stewart.

Humble Oil & Refining Co.'s No. 14 Mercer was a failure at 1,128 feet, and Newberg & Foster's No. 1 Speer, in the William Stoneham Survey, A-250, was also plugged at 1,000 feet. O. K. Pipe Threading Machine Co.'s No. 1 Calvin, A. Rohus Survey, made 8 bbls. at 580-96 feet. Pandem Oil Corp.'s No. 1 Howard, Section 1,366, T. E. & L. Survey, was a failure at 1,000 feet.

Tarkington and others' No. 1 Prideaux Brothers in Section 3, William Stoneham Survey, A-250, made 5 bbls. at 540-48 feet. Wilson and others' No. 8 Beardon was dry and abandoned at 1,085 feet. Atkinson & Sandefer's No. 1 Donnell was dry and plugged at 2,600 feet.

Shackelford County

Humble Oil & Refining Co.'s No. 2 Cook, Section 84, Block 10, E. T. R. R., made 800 bbls. initial at 1,343-59 feet. Milham corporation's No. 2 Casey, Section 581, T. E. & L. Survey, was good for 7 bbls. at 573-80 feet; No. 1 Wilie estate, Section 21, Block 11, T. & P., was dry and abandoned at 925 feet. Texas Unity Oil Co.'s No. 1 Simpson, Section 48, Block 12, T. & P., was dry and abandoned at 780 feet.

Stephens County

Lauderdale & Ennis' No. 1 Sikes was a failure at 3,706 feet. Reeves & Meredith's No. 1 Tolle and others was also plugged at 1,854 feet, and Robert Oil Corp.'s No. 1 Thorp at 1,730 feet.

Palo Pinto County

Singleton and others' No. 1 Smith was was dry and abandoned at 4,100 feet. Whatley and others' No. 1 McClure, at 1,453 feet, and Heath and others' No. 1 Wilbar at 495 feet.

Eastland County

Kirk & Brewer's No. 1 Blackwell was dry and abandoned at 3,400 feet.

Callahan County

Diamond Oil Co.'s No. 1 Terry, Section 47, L. A. L., was a failure at 2,410 feet. Wilkerson & Lightfoot's No. 1 Barr, Section 332, A. Cherry Survey, was dry at 2,600 feet.

Mitchell County

The Magnolia Petroleum Co.'s No. 1 A. P. Watson made 47 bbls. at 2,856-72 feet. California company's No. 4 Womack made 92 bbls. at 2,945-3,064 feet, total depth 3,086 feet.

Howard County

Fred Hyer's No. 1 H. R. Clay made 40 bbls. at 1,508-12 and 1,546-63 feet.

Loving County

P. V. Petroleum Co.'s No. 1 Chapman-Wheat, Section 82, Block 1, W. & S. Survey, was temporarily abandoned at 4,272 feet.

Coleman County

Burke-Geis Oil Co. and Gwinnup's No. 6 Dibrell, Section 265, J. W. Hicks Survey, was a location abandoned. Midwest Exploration Co.'s No. 2 Dibrell "A" made 125 bbls. at 1,907-27 feet. Pennant Oil & Gas Co.'s No. 1 Neeb, Section 32, Comal County school land, was dry and abandoned at 1,768 feet.

Brown County

Anderson & Shultz' No. 1 Dunn, Block 10, J. Delgado Survey, was dry and abandoned at 1,204 feet. Barkley & Conway's No. 1 Allen, Block 8, same survey, was also a failure at 1,367 feet. Brown & Co.'s No. 1 Gaines made 10 bbls. at 1,325-40 feet, total depth 1,345 feet. Conway Brothers' No. 7 Chambers, Section 147, G. Logan Survey, made 15 bbls. at 1,287-99 feet. J. S. Cosden's No. 10 Westerman, Section 150, N. B. Mitchell Survey, made 10 bbls. at 1,290-1,301 feet; No. 8 Williams "A," Coffelt Survey, was a 50-bbl. well at 1,150-61 feet.

Curry & Moore's No. 1 Pickett, Section 147, G. Logan Survey, was good for 35 bbls. at 1,258-65 feet. R. G. Gillespie's No. 2 Henson, J. H. Prater Survey, was dry and abandoned at 1,300 feet.

J. K. Hughes Development Co.'s No. 7 Arledge, Section 150, Block 4, N. B. Mitchell Survey, was a duster at 1,530 feet; No. 9 Arledge was a 75-bbl. well at 1,290-1,310 feet; No. 10 made 200 bbls. at 1,264-94 feet; No. 1 Keller, Section 141, R. Mitchell Survey, made 40 bbls. at 1,231-56 feet. Humble Oil & Refining Co.'s No. 7 Dunn, Block 13, Juan Delgado Survey, was good for 10 bbls. at 1,083-1,107 feet; No. 1 Kilgore "B," Block 3, same survey, made 60 bbls. at 1,147-54 feet; No. 3 Stover, Block 4, J. Delgado, made 15 bbls. at 1,133-43 feet. Ingleright and others' No. 3 Edington, Section 142, R. G. Milliken Survey, made 175 bbls. at 1,255-63 feet.

R. C. McCarter and others' No. 7 Allen, Block 7, Juan Delgado, was a 40-bbl. well at 1,104-16 feet. Midwest Exploration Co.'s No. 2 Suttles, Section 140, R. Mitchell Survey, was good for 25 bbls. at 1,144-56 feet. Prairie Oil & Gas Co.'s No. 15 Gaines, Section 149, Miller Survey, made 5 bbls. at 1,260-67 feet. Smith Oil Co. abandoned locations for Nos. 5, 6, 7, 8, 9 and 10 Dunn in Block 12, J. Delgado Survey. J. L. Thompson's No. 1 Woodridge, in H. B. Gains Survey, was dry and abandoned at 1,328 feet.

Reagan County

Big Lake Oil Co.'s No. 64 University was completed for 953 bbls. at 2,936-55 feet. Texon Oil & Land Co.'s No. 41 University (Group 1), made 350 bbls. at 2,896-2,926 feet; No. 43 made 344 bbls. at 2,940-68 feet; No. 2-A made 250 bbls. at 2,460-61 feet.

Upton County

Dixie Oil Co.'s No. 2 Burleson, Section 100, T. C. Jones Survey, pumped 3 bbls. at 2,185-2,230 feet; No. 3 swabbed and sprayed 175 bbls. and 1,000,000 feet of gas at 2,206-11 feet.

Crockett County

Gulf Production Co.'s No. 3 L. P. Powell "A," Block BB2, pumped 270 bbls. at 2,683 feet.

Val Verde County

Joe W. Morris' No. 1 Moore estate was temporarily abandoned at 2,475 feet. E. T. Williams' No. 1 Moore estate was dry and abandoned at 2,700 feet.

J. D. CLARK PRESIDENT MIDWEST REFINING CO.

CHICAGO, June 4.—John D. Clark, vice president and assistant to the chairman of the board, Standard Oil Co. of Indiana, has resigned from these positions with that organization on account of his election to the presidency of the Midwest Refining Co., and will make his headquarters at Denver, Colo. Mr. Clark retains his position as a director of the Standard Oil Co. of Indiana. No successor is at present being considered for his position as vice president. T. A. Dines, the retiring president of the Midwest Refining Co., becomes chairman of the board.

John D. Clark

Previous to his association with the Standard Oil Co. of Indiana Mr. Clark was general counsel and vice president of the Midwest Refining Co. He is thoroughly conversant with the affairs of the organization, having been instrumental in organizing several of the subsidiaries He was active in bringing about the purchase of the control of the stock of the Midwest Refining Co. by the Standard Oil Co. of Indiana interests. The Midwest Refining Co. is growing to be a very important organization and under the active direction of President Clark, further rapid growth is predicted by his associates here.

Late Fields

(Continued from Page 38)

The oil and gas was struck in the upper part of the sand and several feet of this formation yet to drill through. This is a very important test located on a prominent structure in the Goose Creek area and if it proves a commercial producer will open up a new area for development. During the past few months much acreage has been taken under lease in Casey County. Irwin & Anschuts have secured a large body of land.

NORTH CENTRAL TEXAS

FORT WORTH, Tex., June 8.—Corzelius Brothers' No. 1 Garrett, in East-

land County, wildcat reported with a good show was shot with 60 quarts, but the hole filled with water. The Independent company bought a half interest in Turman and Maxwell's Taylor property, Crane County, 1,800 acres, and a half interest in 20,000 acres in Ector County. The price was about $400,000.

CENTRAL WEST

CHATHAM, Ohio, June 5.—Late completions in the Chatham Field of Medina County, in the Central Ohio Field that had such a heavy play several years ago in the shallow sands has two new dusters added to its area. Harry Dempsey drilled in one at his second test on the Ed Goodyer tract 15, Lot 2, Chatham Township, and the other is the Ohio Fuel Supply Co.'s No. 13 on the E. T. and A. R. Clapp farm, Tract 17, Lot 5, same township.

SELLS KENTUCKY OIL RIGHTS

BALTIMORE, Md., June 7.—The Consolidated Coal Co. has sold to the Louisville Gas & Electric Co. undeveloped oil and gas rights on its lands in the Elk Horn region of Kentucky. Consolidation receives approximately $290,000 for the rights and one eighth of all oil developed. The deal gives the Louisville Gas & Electric Co. the right to drill for oil and gas on about 116,000 acres in the Kentucky Field.

REFINED MARKET IN OKLAHOMA IS SLUGGISH

(Continued from Page 28)

Illustrative of the inactivity another large jobber who buys gasoline regularly every Monday and Tuesday although his company's stocks always are ample, reported he hadn't bought a drop of gasoline in two weeks. Reports to Tulsa offices of refiners from the northern and middle western states, in which the bulk of Mid-Continent gasoline is marketed, indicate that stocks of practically all large jobbers are fairly heavy despite the greatly increased motor consumption of gasoline the last several weeks.

These jobbers, refiners say, bought heavily in May, more so than at first thought, and during the latter part of May replenished their tanks with gasoline picked up at bargain prices from marketers who were being pushed by refiners for instructions on material bought long.

The weakening in gasoline is a disappointment to refiners as it is during June that refiners look for their highest and best markets. It was at this time last year that prices reached their top notch, except for a brief period in February, and continued strong throughout June. U. S. Motor gasoline at that time was worth from 13 to 13¼ cents in contrast to 11¾ cents and under now.

Crude Prices

The situation is more pronounced in view of the higher crude prices this year although some market students point out that the greater cost of raw material is offset considerably by more efficient equipment and the development of cracking, increasing the yield of the more valuable parts of crude.

However, talk of another crude advance in the near future is causing some worry among refiners, who point out that only an increased demand now can bring about a sound higher refined price level. The last crude advance in May came on a declining refinery market and its results were clearly seen.

Refiners freely admit now that there is too much gasoline in storage. This is blamed for the generally uncertain tone which has existed for several months as under normal conditions the gasoline demand would have been sufficient to maintain strong markets.

The gasoline demand has been slow and steady in contrast to previous years and spot markets have appeared quiet but nevertheless a large volume of business has been moving. Had it not been for the excessive amount of gasoline available, refiners say, the steady demand would have put the markets on a sounder basis than ever before.

Refiners, however, look for the present situation to last only a short time, believing that as soon as the scare of the conditions caused by the export reduction passes increased calls for gasoline will come in as a result of heavy June consumption and bring better prices.

Future Delivery

The present declining market, however, is encouraging some refiners to dispose of their gasoline for future delivery at lower prices. A number of such sales were made the past week although it is the buyer now who is slow to make this kind of transactions. The refiners offering this future gasoline expressed the opinion that as June markets usually set the top gasoline prices of the year, present prices would not be far out of line for any future shipments.

On the other hand, these refiners stated they did not expect to see any greater break in prices but rather that there would be a steadier tone maintained this year with markets hovering between 11 and 12 cents.

Some light on present refinery as well as crude markets is given in The Oil and Gas Journal's monthly review of runs to stills. The report, on another page of this issue, shows that Mid-Continent refiners ran 25,170 more barrels on June 1 than on May 1, making an increase of more than 48,000 bbls. in two months.

The increase in runs necessarily means boosting production of gasoline which, according to market students, will have an important bearing on the situation this month. The increase also resulted in a tighter crude situation as the figures showed that the refiners were running a greater percentage of the crude production than before the crude advance May 15.

These figures bear out the opinion of some refiners that the trend is to another advance in crude prices as on June 1, refiners consumed 38.6 per cent of the Mid-Continent crude production while on May 1 only 37.9 per cent was run. This is an important factor, according to market students, although it does not necessarily mean an advance, as shipments out of the Mid-Continent might decrease leaving a greater amount of crude for the refiners.

Gasoline and Naphtha

The uneasy tone in U. S. Motor (58-60 437) gasoline and lower grades was explained by some as being only a state of mind as the export reduction affected directly only the higher gravities. However, as previously mentioned, there was an effort on the part of some sellers to unload. As a result the U. S. Motor grade was being offered by some for resale at 11½ cents and one purchase was reported out of Texas on the basis of 11¼ cents Group 3. One large refiner was reported making open quotations for future delivery at 11⅝ cents. In line with these prices, the 56-58 450 gasoline was quoted at from 11¼ cents with some 11-cent deals reported. The 11-cent material was not general. Naphtha, because of its limited quantities, was practically on a par with the 450 endpoint gasolines being sold at 11¼ cents.

The effect of the export reduction was reflected more directly in high gravity gasolines, particularly in north Texas, where refiners depend more on this business than on the U. S. Motor product. The marked weakening in higher gravities brought about an unusual situation of narrow margins between the various grades of all gasolines. Many refiners were surprised that the U. S. Motor gasoline held up as well as it did considering the low prices of 60-62 400 and the 64-66 grades.

In some cases the 60 gasoline was quoted as low as U. S. Motor although this was not the rule. However, 12 cents was a top price for the former product, with the 64-66 375 gasoline offered only a quarter-cent higher. There was little buying of this product in Oklahoma although approximately 1,000,000 gallons was purchased by one company in north Texas previous to the export price reduction.

The drop of from three-quarters of a cent to a cent in kerosene in a week was only to be expected, according to market students, considering the exceptionally high markets during May. The demand for kerosene was insignificant with refiners trying to move the material left on their hands as low as 9 cents. The few buyers wanting kerosene, however, were offering only 8¾ cents for the 41-43 water white product. The drop caused little interest and generally refiners were expecting as great a drop the following week.

Distillates were practically unchanged and caused little interest. There was not a great amount available and for a time a slight strengthening was reflected but Tuesday orders could be filled at 4⅜ cents on the 38-40 straw grade.

Natural Gasolines and Blends

Due to the continued lack of demand, natural gasolines were off another half cent the past week with Grade C offered from 9⅜ to 9½ cents; B and Double B at 9½ cents and A and Double A at 9¾ to 10 cents. Some Grade C was offered at 9¼ cents. Blends also were down with 64-66 grade purchases reported as low as 11¼ cents.

Fuel Oil and Gas Oil

Spot fuel oil and gas oil prices were fairly steady. Concessions were reported by some buyers but as a rule there was little actual change. The 24-26 was offered in slightly increasing quantities at $1.27½ although the 26-28 grade was becoming available at $1.32½. A few offers were reported at $1.30 cents and 28-30 at $1.40. Spot prices on fuel below 22 gravity also were steady from $1.22½ to $1.25 although future purchases were being made at $1.20.

Purchase of more than 200,000 gallons of gas oil in North Texas by the Atlantic Refining Co. at 3⅞ cents, and, in addition, several fair sized orders and inquiries in Oklahoma strengthened the Group 3 situation. This product during the week dropped to 3⅞ cents but Tuesday as a result of the buying 4 cents apparently was the bottom price.

Lubricants and Wax.

Lubricating oils were unchanged with the movement generally reported excellent. Wax inquiries for June, July and August shipment increased substantially with offers ranging from 4¾ to 4⅞ cents.

McAFEE CRACKING SUIT NOW UNDER ADVISEMENT

HOUSTON, Tex., June 7. — After a several days' trial, Judge Hutcheson of the Federal District Court has taken under consideration the case in which The Texas Company is suing the Gulf Refining Co. involving what is commonly known as the McAfee cracking process in operation at two of the Gulf plants.

In the trial of the case it was shown that Dr. A. M. McAfee and Dr. G. W. Gray, of The Texas Company, developed a cracking process for refining low-grade crudes. Later Doctor Gray assigned his interest to The Texas Company and Doctor McAfee was employed by the Gulf company. The McAfee patents covering the operation of the process were taken out by Doctor McAfee and assigned to the Gulf.

The legal point involved in the case is whether Doctor McAfee was employed in research work for The Texas Company at the time the process was developed or whether his connection was such that any discovery he made would not affect his rights. If he was employed in research work, The Texas Company contends that the patent rights to the process should have been assigned to it. The Gulf contends that Doctor McAfee was a chemist when the process was developed and was not obligated to turn over to The Texas Company any processes he might perfect.

The McAfee process is one of the two or three catalytic processes in operation in the United States. It is said that the process produces gasoline of exceptional quality, especially from the standpoint of antidetonating characteristics.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended May 29 totaled 1,525,000 bbls., a daily average of 217,857 bbls., compared with 1,378,000 bbls., a daily average of 196,857 bbls. for the week ended May 22, and a daily average of 197,464 bbls. for the four weeks ended May 29.

	Week Ended May 29
Atlantic Coast Ports—	
Baltimore	105,000
Boston	65,000
New York	603,000
Philadelphia	118,000
Others	135,000
Total	1,026,000
Daily average	146,571
At Gulf Coast Ports—	
Galveston District	137,000
New Orleans and Baton Rouge	309,000
Tampa	53,000
Total	499,000
Daily average	71,286
At all United States Ports—	
Total	1,525,000
Daily average	217,857
Daily average 4 weeks ended	197,464

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended May 29, totaled 723,000 bbls., a daily average of 103,286 bbls., against 144,000 bbls., a daily average of 20,571 bbls. for the week ended May 22, and a daily average of 88,821 bbls. for the four weeks ended May 29.

	Week Ended May 29
At Atlantic Coast Ports—	
Baltimore	78,000
Boston	79,000
New York	175,000
Philadelphia	76,000
Others	250,000
Total	658,000
Daily average	94,000
At Gulf Coast Ports—	
Port Arthur and Sabine District	65,000
Daily average	9,286
Total Atlantic and Gulf Coast ports	723,000
Daily average	103,286
Daily average 4 weeks ended	88,821

BURFORD IS MANAGER OF CRYSTAL REFINING

F. W. Burford, vice president of the Crystal Refining Co., Shreveport, La., has been made general manager of the company. Mr. Burford succeeds F. W. Garnjost, who has resigned as vice president and general maneger in order to devote his time to private business in New York.

Mr. Garnjost became vice president of the Caddo Central Oil Refining Co. in 1923 and continued in that position when the company was reorganized under the name of Crystal Refining Co. The company operates two refineries at Shreveport with a combined capacity of 8,500 bbls. daily.

Mr. Burford, up to the time of his appointment as vice president in April, was for several years connected with the Skelly Oil Co. at Tulsa. Ralph E. Bishop has been appointed by Mr. Burford as assistant manager of the sales and traffic departments, succeeding John R. Stoltze, resigned. Mr. Bishop was formerly connected with the sales department of the Noble Oil & Gas Co. at Tulsa.

DEATH OF MRS. E. W. MARLAND

PONCA CITY, Okla., June 7.—Mary Virginia Marland, 48 years old, wife of Ernest W. Marland, president of the Marland Oil Co., died at her home in Ponca City Sunday night. She had been in failing health for more than a year. To enable citizens to pay their respects, a public funeral service was held at the Marland home at 1 o'clock Tuesday afternoon. Services for the family were held at a later hour.

ARKANSAS GASOLINE TAX

SHREVEPORT, La., June 5.—Receipt of approximately $350,000 from gasoline and oil tax payments for April up to June 1 has been announced by the Arkansas Department of Insurance and Revenues. The Standard Oil Co. of Louisiana paid $93,499.

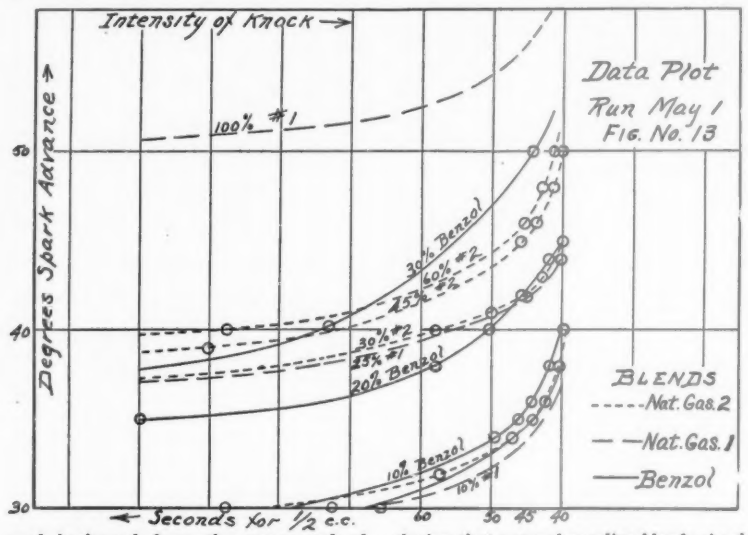
MOTOR FUEL VALUE OF NATURAL GASOLINE

(Continued from Page 121)

ral gasolines as compared to benzol when blended with straight run Mid-Continent gasoline.

Natural gasoline sample No. 3 is the most volatile, and shows the best antiknock properties. Sample No. 1, a less volatile gasoline, has a somewhat similar curve lower on the scale. Sample No. 2, which contains only the last 30 per cent of natural gasoline, seems to possess antiknock properties identical with sample No. 1 up to 30 per cent in the blend, but in greater amounts sample No. 2 shows less antiknock properties than sample No. 1.

Because the natural gasolines used are very different in volatility, sample No. 2 containing no butane or pentane and sample No. 3 containing relatively large amounts of these volatile compounds, it seemed that somewhat more consistent results might be obtained if benzol equivalents were plotted against some value representing volatility. For lack of a better value, the benzol equivalents are plotted against the temperature at which 50 per cent of the fuel is distilled in the A.S.T.M. distillation. Because all the loss on distillation may be assumed as composed of the more volatile part of the distillate, the 50 per cent point is figured backward from the upper end of the distillation curve. Figure 12 gives the results of these computations in graphical form. The 50 per cent point is not a true measure of volatility, and the compositions of the natural gasolines are very different, but Figure 12 indicates at least qualitatively the importance of volatility as a measure of antiknock properties.



In order to indicate the different results that might be expected from different methods of making knocking tests, a complete plot of all data taken in one series is given as Figure 13. The degrees spark advance corresponds roughly to the compression ratio and represents the knocking tendency of the engine. The seconds to collect one-half cubic centimeter in the burette of the bouncing pin device varies inversely as the intensity of knock.

If the fuels were compared at 40 degrees spark advance, by measuring the intensity of knock, entirely different results would be obtained than if the fuels were compared at constant knock intensity of 45 seconds by measuring the spark advance. Tabulations on different bases are given in Table 6 in order of antiknock value.

Another interesting point is brought out by the data plotted in Figure 13. Note that a 30 per cent natural gasoline blend detonates at a 45-second intensity when the spark is set at 42 degrees advance, and that a 20 per cent benzol blend knocks with the same intensity under the same conditions. But at a knock intensity corresponding to 60 seconds the 30 per cent natural gasoline blend will stand 39.7 degrees spark advance and the benzol only 37.5 degrees. At 37 degrees spark advance a 30 per cent natural gasoline blend will cause the bouncing pin to register one-half cubic centimeter in 100 seconds, and a 20 per cent benzol blend will register the same amount of knocking in 65 seconds, although the two blends show the same properties at 42 degrees spark advance. Similar tendencies are evident with all natural gasoline and benzol blends tested.

In general we may say that the intensity of knock, as engine conditions are made worse, increases more rapidly with natural gasoline than with benzol, and also the intensity of knock decreases more rapidly with natural gasoline as engine conditions are improved. As on our adjustment, 50 seconds registered for one-half cubic centimeter corresponds to a steady but not violent knock, longer periods than 50 seconds really represent so called "rough running" rather than "detonation." These data lead to the conclusion that natural gasoline blends should give a smoother running engine than benzol blends of equal antiknock properties.

In general we are justified in concluding that natunral gasoline blended with straight run Mid-Continent gasoline is equivalent to two-thirds as much benzol in blends containing not more than 50 per cent of natural gasoline.

Table 6

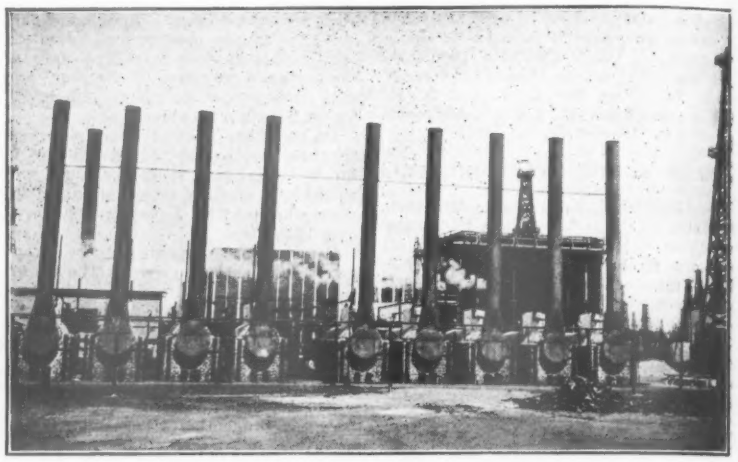
Relative Antiknock Value of Blends, Based on—		
Knock Intensity at 40° Spark	Spark Advance for Intense Knock, 40 Sec.	Spark Advance for Steady Knock, 50 Sec.
100 Per Cent Natural	100 Per Cent Natural	100 Per Cent Natural
60 Per Cent Natural	30 Per Cent Benzol	30 Per Cent Benzol
30 Per Cent Benzol	60 Per Cent Natural	60 Per Cent Natural
45 Per Cent Natural	45 Per Cent Natural	45 Per Cent Natural
30 Per Cent Natural	20 Per Cent Benzol	30 Per Cent Natural
25 Per Cent Natural	30 Per Cent Natural	25 Per Cent Natural
20 Per Cent Benzol	25 Per Cent Natural	20 Per Cent Benzol
10 Per Cent Benzol	10 Per Cent Benzol	10 Per Cent Benzol
15 Per Cent Natural Straight run	15 Per Cent Natural Straight run	15 Per Cent Natural Straight run

UNION USES DRY GAS TO BOOST PRODUCTION

(Continued from Page 29)

while the Shell will run the latter. The Union and Shell have an undivided interest in the Reyes lease and of course each will bear a proportionate share of the expenses. The plant on this lease is a very elaborate one and the 12 boilers, housed compressor plant, absorption towers, tanks and equipment make it look more like a refinery than a conservation plant. It is the acme of cleanliness with everything orderly, methodical and apparently well regulated with all equipment painted and in first-class shape.

Key wells, strategically located, will be used in this field and, although the receiver on the Hellman lease has not yet been finished, No. 101 on the Reyes property, a recent completion, is just about ready to be hooked up. These key wells on the Hellman and Reyes leases, which will receive the dry gas under high pressure, exceeding 500 pounds per square inch, are located in the center of a group of four wells which form a square, there being one at each corner. This arrangement and grouping may, of course, be changed after the plants get under way by the drilling of additional oil or gas wells, depending upon the results attained and the policy adopted. The field at the present time has only been partially developed from a drilling standpoint, as the Union and Shell are wisely conserving this area for future work when there is not such a disparity between production and consumption. The conservation and recovery work in this district should prove immensely interesting and very valuable because the field has been developed sanely and in accordance with well-established oil field practice, not only with respect to spacing of wells but also because of the fact that every attempt has been made to secure a maximum production of crude oil with a minimum production of gas.



Rear view of the Union Oil Co.'s conservation plant at Long Beach showing set up of the boilers and compressors. Note proximity of wells. Trench in foreground contains a lead line to one of the wells on the lease.

Maintain Back Pressure

It is almost universally customary in California to maintain back pressure on flowing wells by using beans or chokers in the flow line and, while there is a diversity of opinion as to the advantages accruing, experiments have indicated that a larger ultimate recovery can be anticipated, inasmuch as the gas is conserved and the energy used to a maximum degree, in that the production of gas per barrel of crude oil produced is less. The Shell conducted a very thorough and systematic series of tests at Dominguez a few years ago and proved to its satisfaction that there is a definite relationship between the gas-oil ratio of a well and the difference in the pressure at the tubing head and the pressure at the face of the oil sand in the well. The Union and Shell have developed the field accordingly and this gas conservation is bound to have some effect on the new work being undertaken.

Numerous data will be compiled in each of the areas as soon as the various plants get under way and the action of each well will be noted for future use in determining the proper application and the most advantageous time to initiate work. At present it is believed that conservation measures should be taken as soon as the wells stop flowing and the pumping stage is reached because of the fact that the oil is still buoyant and volatile. The Union's work at Dominguez where the wells are still flowing and at Huntington Beach and Richfield where pumpers are the rule should throw some light on the subject as to the proper time to introduce dry gas into the formation and which field will respond the quickest, absorb the most gas and yield the greatest amount of casinghead.

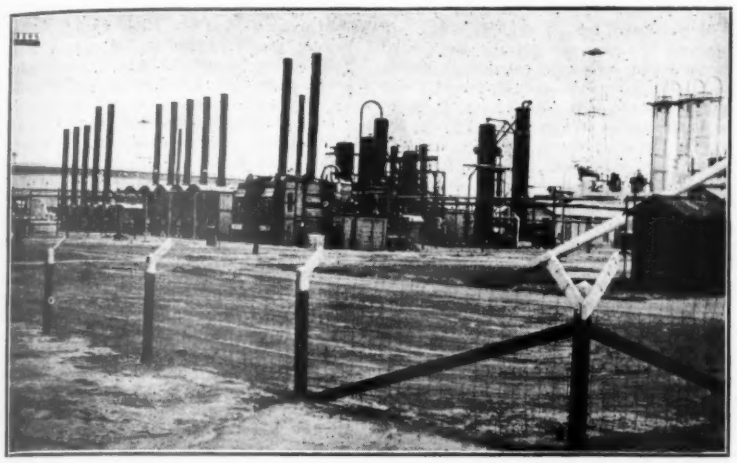
It does not take any stretch of the imagination to appreciate what effect a general adoption of this conservation work would have on crude oil production in California, as it presents unlimited possibilities for development. It is believed that it could be used to advantage in practically every major field in the state and, while the results might not all be as satisfactory as the preliminary work done to date has shown, it should, nevertheless, prove quite feasible. This conservation work is peculiarly adaptable to fields producing light oil and for this reason it is quite possible that something along this line will be done at Santa Fe Springs later by the Union, Standard and General Petroleum Corp., which concerns hold fairly large blocks of acreage. The Shell's stronghold for any work of this nature would be Long Beach and Coalinga, while the Ventura Avenue Field will be a fertile district for the exploitation of this work as soon as the heavy gas pressure subsides and permits the introduction of dry gas into the productive horizon. This, of course, will probably be some time yet but particular attention is directed to the possibility and necessity for work of this nature because of the extreme depth at which production is secured. It is practically a foregone conclusion that the Associated, Shell and General Petroleum will find it advantageous to initiate a conservation program in this area a little later, not only because it will lessen the production cost per barrel of crude but also because it will eliminate the necessity of pumping these deep holes which will not be any too easy.

Position of Companies

The Standard is sitting pretty in the Midway-Sunset district, holding as it does, in addition to its own leases, a vast amount of both drilled and undrilled acreage acquired as a result of the recent merger with the Pacific Oil Co. The California Petroleum, Associated, Chanslor-Canfield Midway Oil Co., North American and Honolulu Consolidated also have holdings in this area favorable to the development of an intelligent conservation program. The Standard and Pan American may undertake some work of this nature in the Elk Hills Field at a later date, particularly if the latter is awarded the Naval Reserve lands now held up in litigation. The Pan American has established a reputation in California of doing things in a most efficient manner and it is a safe bet that the company will not be long in doing something with its holdings in that area when the proper time arrives. The Barnsdall and Union will have everything their own way at Rosecrans and in view of the fact that this field yields an unusually high gravity and very desirable oil it is quite possible that they will get together a little later and build a conservation plant for their mutual benefit.

The West Coyote Field gives the Standard a big edge in that this company can take its time developing the deep Ninety-nine zone and start recovery work

at any time, since the company controls this part of the Coyote district in its entirety. It is impossible to go into any detail and enumerate the possibilities in each area but it is a foregone conclusion that this conservation work is still in its infancy and that a considerable amount of work along this line will be undertaken during the next few years. Those who expect California to pass out of the picture in the near future are in for a sad awakening for this commonwealth has unlimited possibilities for development and expansion not only in the discovery

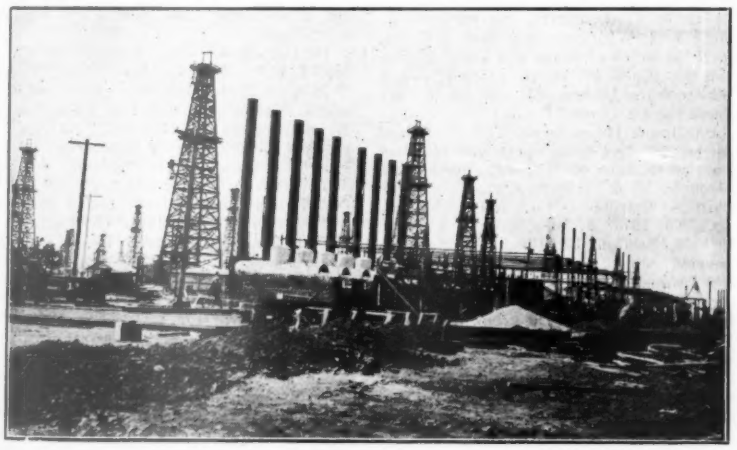


Shell Co.'s conservation plant at Dominguez showing arrangement of boilers and set up. Compressor plant house can be seen together with absorption towers to be used in treating the returned wet gas which has previously been forced down into the key well of a five spot system as a dry gas.

of new productive areas but in increased production resulting from the application of scientific engineering principles to present producing horizons in existing fields and the discovery and development of new and deeper zones.

Benefits of Conservation

The principal advantages resulting from the use of conservation plants similar to those now being erected by the Union are a lower production cost per barrel of crude, a higher ultimate recovery, and a better utilization of natural gas. If later developments prove its adaptability and



A battery of boilers to be used by the Union Oil Co. at Huntington Beach in conjunction with a number of compressors to stimulate oil production and secure maximum recovery by forcing dry gas into the formation under high pressure, the dry gas coming back saturated. It is used over and over again after being run through absorption towers where the casinghead is recovered.

technicians succeed in improving on the present apparatus and method of use, these recovery plants will, without doubt, come into general usage. If these conservation units are instrumental in substantially increasing well production and effecting a 10 or 20 per cent greater ultimate recovery, they will no doubt receive considerable attention in future revaluation work. This phase of the situation is a very important one and geologists and petroleum engineers in touch with conditions are up that proverbial creek debating as to the best policy to follow.

Natural gas heretofore, the most expensive of all oil field products to handle, may, in the not far distant future, prove an important factor in reducing the cost of producing a barrel of crude and if it is utilized to any extent commercial users of natural gas may be obliged to resort to fuel oil or artificial gas. Because of the nearly unlimited supply of nautral gas available in California at the present time, due to the development of new fields, it is being used quite extensively in commercial enterprises and by public utilities for lighting and heating purposes. It is also used as fuel in the various fields and most of the pipeline companies are utilizing it at all pump stations along the line. It is logical to assume that when it becomes an important factor in stimulating production and effecting a higher ultimate recovery, a considerable part of that supply now entering commercial channels will be diverted to the more important duty of raising crude oil to the surface. This will of course come around gradually and depend upon the rapidity with which producing companies start using gas conservation plants. The diversion of natural gas from commercial channels will undoubtedly result in a proportionate gain in fuel oil consumption, inasmuch as it will be necessary to replace the natural product with an artificial one.

Natural Gas Industry

It is problematical just what effect this new order of things will have on the natural gas manufacturing industry, but one or two things are quite obvious. If the practice becomes general, these conservation plants will result in a larger production of casinghead gasoline by operating companies and if the output of natural gas gasoline is sufficient to meet their needs it is possible that they may reduce their purchases from independent manufacturers. This does not mean, of course, that the numerous absorption units of independent operators will be shut down, as there will probably always be a demand for casinghead gasoline. It is interesting to note in this connection that approximately 25,000 bbls. of natural gas gasoline has been imported into California from the Mid-Continent since the first of this year. California marketing companies are dependent at the present time to a certain extent upon the independent casinghead manufacturer for his product in order to sweeten straightrun gasoline, but it is quite possible that their own casinghead production, resulting from the establishment of conservation plants and output of cracked gasoline, will tend toward lower prices in the future. This is merely an eventuality and depends upon future conditions. The fact remains, however, that conservation plants tend toward a greater ultimate recovery of crude oil, cut down the lifting cost per barrel and will result in a larger output of natural gas gasoline. They will undoubtedly prove a big economic factor in the future and, while new installations will probably not be made immediately, they will come in time. The industry is obliged to the Union Oil Co. of California for its initiative in undertaking this work which may become nationwide in its scope. Mid-Continent operators have been using compressed air with varying success for some time and to them the work of the Union should prove of particular interest as it might prove advantageous to change from air to gas if practicable.

CALIFORNIA MARKETS SLIGHTLY IMPROVED

LOS ANGELES, Calif., June 5.—Petroleum exports out of Los Angeles Harbor reached a high mark for the year during the last week in May. Thirty-seven tankers carrying 2,687,279 bbls. of oils moved out of the harbor during this period. This volume of exports has only been exceeded two or three times before, during the life of the harbor.

Chief among the week's shipments is the 322,625 bbls. of gasoline consumed in Atlantic foreign trade. Of this amount, 179,625 bbls. went to Germany and 143,000 bbls. to England. The European gasoline market has been a factor in local gasoline movements throughout the year and the increased demand shown by Germany for California gasoline indicates that future shipments to Europe will hold up well. England, of course, has been a heavy user of California gasoline for some time. Australia also took 65,000 bbls. of gasoline during the past week.

The majority of shipments to the east coast were of crude and fuel oil, only one tanker carrying 94,998 bbls. of gasoline going to New York.

Fuel oil has been leaving the harbor in large volumes recently. During the past week almost 350,000 bbls. went to the Atlantic Seaboard, 143,000 bbls. to Europe, and about 330,000 bbls. to ports in the Pacific. Of the last amount, 161,000 bbls. were shipped to China.

Generally speaking, the local market has been marking time during the past week. There has been no change of any importance. Motor gasoline sales are improving. Natural gasoline has also strengthened somewhat. The improvement, however, has only been slight in each case.

Fuel oil is strengthening greatly and is now in a better position than for many months. Kerosene, on the other hand, has weakened with no immediate prospect of its position improving.

NORTH TEXAS MARKET SOFTER, PRICES LOWER

WICHITA FALLS, Tex., June 7.—A three-fourths-cent reduction in export gasoline postings at Baton Rouge was an especially unfavorable development in North Texas refined markets the past week. As a result of this cut, which came unexpectedly Saturday, not only higher gravities, but also all other grades of gasoline, were much softer with prices lower.

Some purchases of higher gravity gasolines for export were reported but these were insufficient to reflect any firming in the market. As a result, 64-66 375 gasoline was available at 12¼ cents, the 390 endpoint at 12 cents and the 60-62 400 product at 11¾ cents.

The export purchase was by Galena-Signal, which placed orders for approximately 1,000,000 gallons of 64-66 375 gasoline at 12½ cents. Had it not been for the export reduction the following day this order would have resulted in a better situation, it is claimed.

The U. S. Motor (58-60 437) and lower grades of gasoline were weaker in sympathy with the higher gravity material. With demand still slow, refiners in some cases have been forced to offer U. S. Motor gasoline as low as 11¼ cents. Several small sales were made at this price although they were in competition with Group 3 on differential territory. A few buyers of 56-58 450 gasoline reported they were able to fill orders at 11 cents easily.

The weakening in kerosene was more pronounced than in any other product due to the almost entire absence of any orders. Refiners seemed more than anxious to sell 41-43 water white material at 9 cents and buyers thought they could get material under that if they had any orders. A sale of 40-43 product was reported at 8¾ cents.

Natural gasolines also were due for a continuation of the inactivity of the preceding weeks and prices were off from an eighth to a quarter cent. Some Grade C was reported moved at 9½ cents and offers of 9⅝ cents were frequent.

A purchase of 200,000 gallons of gas oil by the Atlantic Refining Co. was of particular benefit to this product in North Texas. However, this material still was available Monday as low as 3¾ cents. Fuel oil also maintained a fairly even level at $1.30.

PENNSYLVANIA MARKET HAS STRONGER DEMAND

OIL CITY, Pa., June 5.—Gasoline during the past week in the Pennsylvania market strengthened considerably. The demand is much stronger than it was and there is more of this product moving from the refineries in the Pennsylvania district. An astonishingly great consumption of motor fuel over the holidays is now being reflected in the calls upon the refineries for additional gasoline supplies made necessary by the drain upon service and bulk station tanks by the motorists.

Fuel oil is in about the same condition as it was for the preceding week. The demand for kerosene was not so heavy during the week and the price sagged some. There is still considerable kerosene in the hands of brokers which was bought during the past 30 days and this is now being worked off. Considering this fact the demand for kerosene was good during the week, but it was not nearly so great as had previously prevailed.

Neutrals continue to be one of the strongest features of the market and this product is very scarce in the Pennsylvania refining district, many of the refiners having none at all in storage. Cylinder stocks continue weak. There was some improvement in the demand for wax during the week.

STATE CAN COLLECT ON ARMY'S GASOLINE

AUSTIN, Tex., June 5.—Right of the State to collecte the 1-cent gasoline tax on gasoline sold the United States Army at Fort Sam Houston was upheld by Third Civil Appeals Court Wednesday in the appeal of Grayburg Oil Co. vs. State of Texas. The judgment in favor of the State by Travis County District Court was affirmed.

The decision affects all companies selling gasoline to the Federal Government, and involves enough taxes already accrued, according to Assistant Attorney General Ernest May, who handled the case, to pay the attorney general's salary for a quarter of a century.

XUM

GULF PRODUCTION CO. TAKES LEAD IN LOCATIONS

(Continued from Page 40)

Block Y, was also a completion, good for 300 bbls. the first 24 hours when the bridge was cleaned out. It had been shot from 2,860-90 feet with 60 quarts, total depth being 2,946 feet.

The Skelly Oil Co. completed No. 3 Whittenburg, Section 22, as a gasser good for 4,000,000 feet of gas at 2,805-21 feet.

The Coble Oil Co. and Whittenburg's No. 2 Whittenburg in Section 12, Block Y, which had been spraying 20 bbls. daily for a couple of weeks, was shot with 210 quarts at 2,910-79 feet and bridged. The Derby Oil Co.'s No. 1 Johnson Brothers in the Mary Whitley Survey was spraying 10 bbls. hourly from lime at 2,969-81 feet. The Dixon Creek Oil Co.'s No. 8 Smith, Section 11, Block Y, was shot with 240 quarts from 2,810-2,970 feet and bridged. It was being cleaned out. Same company's No. 14 Smith in Section 14, was completed for 500 bbls. at 2,867-2,937 feet. It was reported last week, having made 860 bbls. the first 12 hours. Dixon Creek's No. 18 Smith, same section, had a cavey hole but made 30 bbls. daily at 2,955-85 feet; No. 29 Smith, Section 5, Block Y, had the lime pay at 2,850-2,900 feet and was cleaning out to shoot.

Other Producers

The Douglas Oil Co. and Cline's No. 1 J. A. Whittenburg, Section 15, Block X02, was making 8,000,000 feet of gas at 2,925-85 feet and still drilling. The Gates Oil Co.'s No. 3 W. L. Kingsland, Section 4, Block Y, was shot with 115 quarts at 2,954-3,040 feet and made 75 bbls. the first 24 hours. It was completed. The Gibson Oil Co.'s No. 1 Johnson Brothers in Section 74, Block 46, reached a total depth of 2,735 feet when the 30,000,000-foot gas flow was ignited and the rig burned. The Gibson Oil Co. and McMillan's No. 1 W. L. Kingsland, Section 6, Block B-4, which was shot last week and bridged, was good for only 100 bbls. with 10 per cent water, the first 24 hours and was completed. Pay was 2,887-2,940 feet. Golding & Phillips' No. 1 Hodges, Section 1-A, Block M-26, was deepened only 2 feet to 2,817 feet and was cleaning out, trying to fight cave, preparatory to shooting.

The Phillips Petroleum Co.'s No. 1 Johnson-Barnum, in Section 64, Block 46, made 300 bbls. the first 24 hours at 2,805-10 feet. The Roxana Petroleum Corp.'s No. 1 Lee Bivins, Section 86, Block 46, was drilled at 2,480 feet with a total of 75,000,000 feet of gas topped at 1,690 feet. The same company's No. 2-B Smith, Section 11, Block Y, had oil in lime 2,830-68 feet but water in the next foot and plugged back to 2,864 feet where it made 265 bbls. of fluid, 30 per cent of which was water. The Skelly Oil Co.'s No. 1 Johnson Brothers "A", Section 4, Block B-4, was shot with 30 quarts at 2,964-72 feet and was making 10 bbls. of cut oil per hour. J. L. Smith's No. 1 H. E. Smith, Section 7, Block Y, made 70 bbls. the first 24 hours following a 100-quart shot reported last week, even though the first hour's output was 30 bbls. The well is to be shot again. The Sunny Jim Oil Co.'s No. 2 J. A. Whittenburg, Section 12, Block Y, produced 500 bbls. of cut oil from pay at 2,948-75 feet and will plug back. The Summit Oil Co.'s No. 1, Section 13, Block Y, finally succeeded in drilling by tools at 2,989 feet and increased from 150 bbls. to 330 bbls. daily. Same concern's No. 2, was flowing 10 bbls. hourly at 2,911-48 feet and still drilling. White Eagle Oil & Refining Co.'s No. 2 Smith-Capers, Section 11, Block Y, was pulling the 6-inch and making 50 bbls. from pay at 2,881-2,964 feet.

Marland Oil Co.'s No. 1 Burnett estate "B", in Section 101, Block 4, was completed for 15 bbls. at 3,096-3,114 feet. The same company's No. 5 Burnett estate, Section 107, Block 5, made 300 bbls. the first 24 hours at 2,983-97 feet, total depth being 3,006 feet. Young & Patrick's No. 1 J. C. McConnell, Section 65, Block 4, was not completed but had 50,000,000 feet of gas at 2,455-2,660 feet and was running 8-inch pipe.

Panhandle First Reports

In Carson County, the American Refining Co.'s No. 8 Burnett, 450 feet each way from the SW cor. Section 115, Block 5, I. & G. N. Survey, rigging up.

In Wheeler County (wells previously reported but locations not given), Smith and others' No. 1 W. J. Johnson, 150 feet south and east NW cor. SE, Section 88, Block A-5, H. & G. N. Survey, rig. Smith, Brady and others' No. 1 P. J. Sorenson, 330 feet north and 632 feet west SE cor. NE NE, Section 53, Block A-5, same survey, rig.

In Ochiltree County, Harris & Schaffer's No. 1 R. H. Moore, SW cor. NE, Section 471, Block 43, H. & T. C. Survey, rig.

In Lipscomb County, Snyder and others' No. 1 A. Barton, C Survey 504, Block 43, H. & T. C. Survey, rig.

In Hutchinson County, the Buttram Petroleum Co.'s No. 1 J. A. Whittenburg, NE cor. of north 80 acres of Section 27, Block 47, H. & T. C. Survey. Center Dome Oil Co.'s No. 2 J. E. Pritchard, SW cor. of south 40 acres of southwest 80 acres, Section 1, Block B-4, D. & S. E. Survey, rig on ground. Dixon Creek Oil Co.'s No. 27 Smith, NW cor. of south 30 acres of west 60 acres of SE, Section 12, Block Y, M. & C. Survey, rig building; No. 28, SW cor. of same 30 acres, rig building. Empire Gas & Fuel Co.'s No. 1 Johnson Brothers "B", NE cor. NW SW, Section 21, Block Y, A. & B. Survey, rig. Same company's No. 4 J. F. Weatherly, SE cor. NE, Section 19, Block Y, M. & C. Survey, cellar. Gibson Oil Corp.'s No. 8 W. L. Kingsland, SW cor. SW NW, Section 4, Block Y, M. & C. Survey, rig. Gibson Oil Corp. and McMillan's No. 1 W. L. Kingsland, 1,520 feet east and 330 feet north of SW cor. N half, Section 6, Block 4, D. & S. E. Survey, rig. Lucky 10 Oil Co.'s No. 2 Smith, 330 feet each way from the SW cor. NE, Section 11, Block Y, M. & C. Survey, rig. S. D. and W. W. McIlroy's No. 7 Smith and others, 330 feet north and 990 feet west SE cor. N half NW, Section 14, Block Y, same survey, cellar; No. 8, SE cor. N half NW, same section, cellar. McMan Oil & Gas Co.'s No. 2 Johnson Brothers-Wheatley, NE cor. of McMan's 80 acres in Section 66, Block 46, H. & T. C. Survey, rig on ground; No. 1 J. A. Whittenburg-Archer, SW cor. north 57 acres of south 177 acres of Section 65, Block 46, rig on ground; No. 2 Whittenburg-Archer, SE cor. of same tract, rig on ground.

Phillips & Heywood's No. 2 Smith and others, 330 feet from north and 990 feet from west lines of NW SE, Section 12, Block Y, M. & C. Survey, rig on ground. Phillips Petroleum Co. and Coble Oil Co.'s No. 15 J. A. Whittenburg, SW cor. N half, Section 13, Block Y, M. & C. Survey, cellar; No. 16, NW cor. SW NW, same section, cellar; No. 17, SW cor. NW NW, same section, cellar.

Prairie Oil & Gas Co.'s No. 5 Johnson Brothers "A", 500 feet north and 330 feet east of SW cor. of south 240 acres, Section 64, Block 46, H. & T. C. Survey, cellar; No. 15, NW cor. NE SW, Section 21, Block Y, A. & B. Survey, cellar; No. 16, NW cor. SW SE, same section, cellar. Relief Oil Co.'s No. 4 Smith, SE cor. NE NE, Section 11, Block Y, M. & C. Survey, rig on ground. Sinclair Oil & Gas Co.'s No. 1 W. S. Christian, NE cor. Section 8, M. L. Anglin Survey, location. Skelly Oil Co.'s No. 1 Johnson Brothers (Section 20), SE cor. NW, Section 20, Block Y, M. & C. Survey, rig on ground; No. 2, NW cor. SW NW, Section 20; No. 3, NW cor. same section; No. 4, 330 feet south and 126 feet east NW cor. NE NW, Section 20, all rigs on ground. Triangle Oil Co.'s No. 2 Smith, NE cor. north 40 acres of west 60 acres, NW, Section 5, Block Y, M. & C. Survey, rig; No. 3 Smith, SW cor. same 40 acres, rig. Wentz Oil Corp.'s No. 1 Cal Merchant, NE cor. of south 171 acres, Section 34, Block 47, H. & T. C. Survey, location; No. 1 P. E. Reimer, 330 feet west and 479 feet north SE cor. Section 2-A, P. E. Reimer land, location.

The descriptions of new Gulf Production Co. locations will be given later. No. 4 is in the NE cor. of Section 66, Block 46, H. & T. C. Survey; No. 5 is located between Nos. 2 and 3, same section, and Nos. 6 and 7 are between Nos. 1 and 2, Section 66. Gulf's No. 5-E is directly north of No. 1-E, in Section 65, Block 46. While the measurements are lacking, the Gulf made two locations in Section 1, Block I, H. & G. N. Survey; two in Section 90, Block Z; two in Section 89, Block Z; one in Section 24, Block 47; and one on the south 40 acres of W. S. Christian Survey, as well as about a dozen others.

Murchison & Fain made two locations in the D. W. Pritchell Survey, a strip 137 feet wide and 2,104 feet long, lying between Section 1, Block I, and Section 24, Block 47.

Panhandle Drilling

In Moore County, Phillips Petroleum Co.'s No. 1 J. T. Sneed, Jr., was cementing 8-inch at 2,010 feet. Prairie Oil & Gas Co.'s No. 2 Sneed, Section 26, Block 6-T, was shut down at 325 feet for water and, Moore Oil Co.'s No. 1 Sneed was also shut down at 975 feet, having lost the 12-inch pipe. Lee Flowers & Brookins' No. 1 J. T. Sneed, Jr., was drilling at 360 feet. Cadman and others' No. 1 Sneed, was drilling at 490 feet.

In Gray County, Clark & Baldridge's No. 1 Merten Brothers, Section 82, Block 3, was drilling at 3,089 feet in lime, with no increase in oil. It had 500 feet of oil in the hole at 3,067-72 feet. Clark & Jones' No. 1 Workey & Reynolds, Section 83, Block 3, was drilling at 2,090 feet. The Texas Company's No. 2 Saunders had 200 feet of oil in the hole from granite wash at 2,780-90 feet and total depth was 2,925 feet. Wilcox-Pampa Oil Co.'s No. 4 Worley & Reynolds, Section 62, Block 3, was drilling at 1,800 feet.

In Hartley County, Deep Rock Oil Co.'s No. 1 Lyman & Balfour, Section 9, Block 2, was drilling at 700 feet. W. H. Holmes' No. 1 Coots, Section 58, Block XR, W. M. D. Lee Survey, was building rig.

In Wheeler County, Hal H. Vaughan's No. 1 Roger O'Gorman was drilling at 1,988 feet after getting a small show of oil at 1,845-55 feet. Midwest Exploration Co.'s No. 1 J. M. Shelton, Section 21, Block A-8, was drilling at 1,950 feet. Gibson Oil Corp.'s No. 2 Phillips was a rig shut down; No. 3 was drilling at 1,535 feet.

In Carson County, Amatex Oil Co.'s No. 1 E. S. Polling, Section 22, Block Y-2, was shut down at 1,040 feet for water. American Refining Co.'s No. 6 Burnett estate, Section 115, Block 5, reached total depth of 2,960 feet. Marland Oil Co.'s No. 6 Burnett, Section 107, Block 5, was drilling at 400 feet; No. 7, spudding 56 feet; No. 1 Burnett "C", Section 105 spudding 155 feet. Prairie Oil & Gas Co.'s No. 1 Deahl, Section 5, Block 5, spudding 40 feet. Roxana Petroleum Corp.'s No. 1 E. F. Ryan, Section 92, Block 4, I. & G. N., spudded and shut down for water. W. W. Silk and others' No. 6 Burnett estate, Section 115, Block 5, drilling 1,675 feet. The Texas Company's No. 4 M. C. Burnett, drilling sandy lime and granite wash at 2,924 feet; No. 8 M. C. Burnett, Section 92, Block 5, drilling 1,535 feet; No. 9 M. C. Burnett, Section 127, Block 5, rigging up.

ANOTHER GASOLINE INVESTIGATION ORDERED BY PRESIDENT AND SENATE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., June 5.—President Coolidge, according to an unofficial statement, intends to request the Federal Trade Commission to make an investigation of gasoline prices in this country to determine whether there is any restraint of trade or other violation of law.

This action supplements the investigation called for in the Senate resolution instroduced by Senator Trammell (Dem.), Florida. The President's request it is stated, will not be made until he receives a report from the Department of Commerce, which has been conducting a study of the oil and gasoline situation respecting production and distribution.

At the White House it is stated that while the President will take this action he does not expect the commission to discover any irregularities incident to the increasing prices of gasoline. He is inclined to believe, it is said, that the rise in gasoline prices is the result of a reduction in the supply and an increase in demand, rather than from any manipulation on the part of the oil industry. His opinion has been formed from advices he has received from Government agencies that undertake to keep in touch with the industry. He is fortified in this view by the result of an investigation made by the Federal Trade Commission a year or so ago, which indicated no collusion on the part of companies. The increase in the number of automobiles amounting to 3,000,000 more vehicles at the present time than there was a year ago, and the increasing use of petroleum in industries he regards as influential. He also understands that last year the increase in oil production tended to lower prices abnormally at that time.

It is believed that the President's proposed action may have been partly the result of protests he has received from many quarters against gasoline prices, among which is one from Governor Byrd of Virginia, who personally requested the President to have an investigation made by the Federal Trade Commission.

Senate Approves Inquiry

By persistent action Senator Trammell obtained the passage by the Senate of his resolution originally introduced March 10, 1925, directing the Federal Trade Commission to investigate and report to the next session of Congress. "First, the very material advances recently made in the price of crude oil, gasoline, kerosene and other petroleum products and whether or not such price increases were arbitrarily made and unwarranted; second, whether or not there has been any understanding or agreement between various oil companies or manipulations thereby to raise or depress prices or any conditions of ownership or control of oil properties or of refining and marketing facilities in the industry which prevent effective competition; third, the profits of the principal companies engaged in the producing, refining and marketing of crude oil, gasoline, kerosene and other products during the years 1922, 1923, 1924 and 1925, and also such other matters as may have bearing upon the subjects covered by the provisions of this resolution."

The resolution was passed without a record vote and without debate. The Federal Trade Commission will begin its work at once.

The only opposition voiced against the passage of the resolution was by Senator Harreld of Oklahoma.

NEW YORK MARKETERS IN ANNUAL SESSION

By L. M. Fanning

NEW YORK, June 7.—Speaking at the annual meeting of the New York State Petroleum Marketers Association held here today, L. V. Nicholas, of Chicago, president of the National Petroleum Marketers Association, said that collective motor travel has arrived with passenger vehicles carrying a larger number of people and with bus operation extending throughout the country.

He pointed out that we are now in the midst of a transition from careless gasoline use in large volume to more efficient utilization. Developments in auto engine design, he declared, point to a

lighter car which will result in less gasoline and lubricating oil consumption per unit. In this connection he spoke of the trend toward anti-knock motor fuels.

Collective travel, he said, meant more centralization in the purchasing of petroleum products. He advised the independent jobbers to study carefully the effect of this fundamental change in their business.

F. W. Lovejoy, of the Vacuum Oil Co., spoke of the present and future of the Independent filling station. He pointed out ways for increasing the public use of filling stations.

Franklin Miller, of the Curtis Publishing Co., spoke on the importance of salesmanship, and F. H. Sisson, vice president of the Guaranty Trust Co., New York, on the business outlook. A committee was appointed to effect a permanent organization and raise funds for the employment of a permanent secretary. All directors of the organization were re-elected with one exception. F. E. Witsall, of the Vacuum Oil Co., was elected to succeed E. M. Wharff, of New York.

GULF REFINING CO. SUES OTHER COMPANIES

(Continued from Page 30)

of those belonging to the Universal company shows that in part the same operating features are claimed for both. In its suit against the Gulf the following patents are involved: Nos. 1,281,884; 1,392,629; 1,484,445; 1,488,325; 1,517,830; 1,525,281; 1,534,927; 1,546,634; 1,543,831; 1,543,832 and 1,568,400.

Concerning the series of suits filed by the Gulf company, H. J. Halle, president of the Universal Oil Products Co., on Monday issued the following statement:

"The Universal Oil Products Co. on January 12, 1926, brought suit against the Gulf Refining Co. in the Federal Court at Fort Worth, Tex., for the infringement of 11 patents involving over 50 claims. This suit was brought on this large number of patents after careful prosecution of these patents through the patent office, and after an exhaustive investigation by our patent counsel as to the correctness and strength of our position. This suit is still pending, and to date, no answer has been filed by the Gulf Refining Co.

"The recent suits by the Gulf Refining Co. against certain of our licensees were fully anticipated by us before we brought our suit against the Gulf Refining Co. We have long since been entirely familiar with the Bacon, Brooks, and Clark patents, sued upon in these suits by the Gulf Refining Co., and we were completely and perfectly satisfied that none of these patents could be sustained against the Dubbs process used by any of our licensees. We regard these suits brought by the Gulf Refining Co. as purely strategic and retaliatory in character and without meritorious basis.

"The Gulf Refining Co. has had knowledge of the commercial operation of the Dubbs process for some six years, and has never attempted in any way to assert any of its patents against our process, or even to make any claim or serve any notice of infringement until it brought these suits. We are fully confident that none of these patents sued upon can be sustained against the Dubbs process, and have been so advised by our various patent counsel.

"We will fully protect all of our licensees in accordance with our license agreements and will vigorously defend these suits brought by the Gulf Refining Co."

PANHANDLE PEAK AT LEAST 100,000 BARRELS

(Continued from Page 30)

in many a day. There is a queer quality in the limey formations encountered which limits the work of rotary tools, and once more places the "up and down" boys in dominance. Certain section of the limey strata absorb the water which is introduced into the holes and with its introduction the formation expands like a sponge. Should this occur while the tools are even momentarily inactive, the lime clinches the tools, and the next step is to skid the rig. This is the prime cause of the rotary failures, and it can well be visualized that their operation will be limited should this condition continue.

The average cost of completed wells in the Panhandle Field is $35,000. The field at present is 28 miles from the town of Panhandle, the nearest railroad shipping point. The rigs, tools, and casing as well as all other necessary supplies are hauled from Panhandle and the trucks have established a rate of $6 per ton for the haul to the field. Considering the roads, one wonders how any profit is realized on the haul.

The average cost of rigs in the field is $4,500. This figure includes both the hauling and the construction of the derricks. The prevailing rate paid to drilling contractors for drilling the wells is $4 per foot. These two items total $16,500, and leave $18,500 for the cost of five strings of casing. The general practice has been to set 200 feet of 15-inch, 900 feet of 12½-inch; 2,000 feet of 10-inch; 2,700 feet of 8¼-inch; and finish the hole with 6⅝-inch casing. This procedure has been varied to suit differing conditions, but is fairly uniform. The average time required to drill a well is 65 days.

Bradenhead the Gas

There has been unlimited discussion as to the proper method of handling the wells in which a huge volume of gas is found. In the opinion of the more experienced operators, the proper way to treat this situation is to conserve the gas pressure by bradenheading the gas. It is believed that should the gas be permitted to escape, not only would the diminished pressure prove detrimental to the production, but that also the space in the top of the structure formerly occupied by the gas would form a reservoir into which the oil would be migrated by the hydrostatic pressure; and its recovery would be extremely doubtful. This phase of oil field operation was treated extensively in a recent Government bulletin.

Some time ago the Texas Railroad Commission issued an order that the last string of casing be cemented to conserve the gas. This has since been modified and the matter left to the discretion of the operators. In many instances the enforcing of this order would work a hardship; for instance, where the production of the well was small and it was later desired to raise the casing and shoot the well.

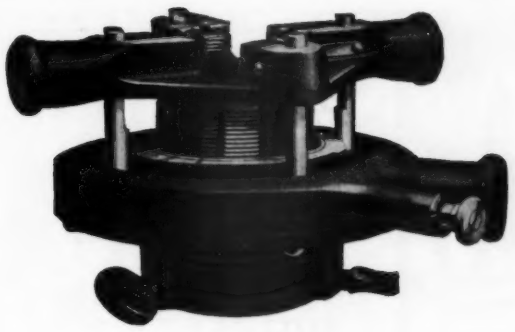
Parallel with the huge scope of other operations in this field, the size of the shots used has been greatly multiplied. The Lennix-Patterson Co. inaugurated this custom when they shot their well with 560 quarts. The Jake Phillips well was later shot with 870 quarts, and this is believed to be the largest shot ever used in well shooting.

Owing to the unsatisfactory result of such heavy shots, it is believed that there will be a return to the lighter shots.

A careful check made upon three successive days at the start of the road from the town of Panhandle to the field reveals that supplies are entering the Panhandle Field at the rate of $1,000,000 per week. This is not a vague guess but the result of inspecting the loads and appraising their contents. There are about 400 trucks working out of Panhandle to the field and they are always in demand.

Spacing of wells will have a great bearing upon the profit and loss side of operations here, and in this respect the companies having vast acreage will benefit in a much greater degree than the company having a small lease. It is believed that spacing one well to each 40 acres is the ideal manner, and this is done where possible. The smaller holdings naturally are drilled on more limited acreage and most of these leases have spaced one well to every 10 acres.

In conclusion it might be mentioned that there are two lines of endeavor which will unquestionably profit by the Panhandle Field, the supply stores and the drilling contractors.



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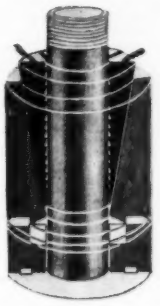

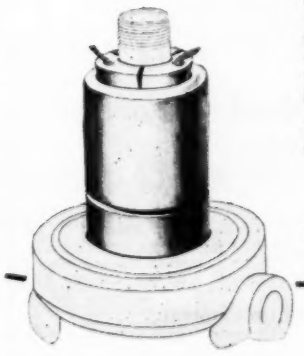

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PRICES MAINTAINED THROUGHOUT THE EAST

(Continued from page 119)

market was the first important export shipment of the new "ethyl" gasoline. It is understood the Anglo-American Oil Co. has made arrangements with Standard of New Jersey to market this product throughout the British Isles. The first consignment consisted of more than 300,000 gallons.

The export market generally was good, with bulk gasoline shipments constituting one feature, amounting to 5,470,676 gallons during the week ended June 2. In addition, case exports aggregated 1,894,110, making the total gasoline movement for the week 7,364,786 gallons.

Lubricating oil also moved into export channels in good volume during the week. Bulk shipments aggregated 1,990,678 gallons, barrel exports 1,147,550 gallons, and case shipments 172,550 gallons.

Shipment of petroleum asphalt continues heavy, the amount exported last week amounting to 3,260,700 pounds.

The following table shows principal exports of petroleum and petroleum products from New York reported during the last three weeks (figures in gallons unless otherwise noted in parentheses):

Gasoline:	June 2	May 26	May 19
	Week Ended		
Bulk	5,470,676	.....	2,538,982
Cases	1,894,110	538,110	1,904,750
Kerosene:			
Bulk	1,210,224	.....	.....
Cases	1,000,300	2,030,910	1,981,230
Gas oil:			
Bulk	353,506	.....	.....
Lubricating oil:			
Bulk	1,990,678	.....	1,058,951
Barrels	1,147,550	1,751,500	1,816,100
Cases	172,550	372,990	247,470
Lubricating grease:			
Barrels (lbs.)	.....	.....	771,750
Paraffin wax:			
Babs (lbs.)	768,020	3,647,040	1,032,240
Barrels (lbs.)	153,425	755,250	109,250
Petroleum asphalt:			
Barrels (lbs.)	3,260,700	1,263,975	4,656,900

The foregoing includes shipments of 500 bbls., 1,000 cases, or more.

Oil Receipts Decline

Receipts of crude and refined oil at Atlantic Coast ports for the week ended June 2 are estimated at 3,386,000 bbls., a daily average of 483,000, compared with 4,244,000 bbls., or 607,000 daily, the preceding week.

Receipts from the Gulf Coast fell off considerably, averaging for the week only 280,000 bbls. daily, against 370,000 bbls. during the week ended May 26.

Imports from South America continued large, averaging for the week ended June 2 approximately 32,000 bbls. daily. Imports from Mexico averaged 116,000 bbls. daily. For the week ended May 26 imports from Mexico averaged 137,000 bbls. daily, and from South America 39,000 bbls. a day.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific Coasts of the United States, and imports, for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended		
	June 2	May 26	May 19
Gulf	280,000	370,000	385,000
Pacific	55,000	61,000	84,000
Imports	148,000	176,000	119,000
Total	483,000	607,000	588,000

Daily Averages by Months				
1926:	Gulf	Pacific	Imports	Total
May	318,000	66,000	139,000	523,000
April	326,000	92,000	146,000	564,000
March	317,000	97,000	178,000	592,000
February	332,000	73,000	122,000	527,000
January	279,000	59,000	96,000	434,000
1925:				
December	298,000	56,000	103,000	457,000
November	259,000	36,000	92,000	387,000
October	249,000	36,000	102,000	387,000
September	306,000	66,000	76,000	448,000
August	291,000	54,000	90,000	435,000
July	391,000	63,000	107,000	561,000
June	379,000	66,000	118,000	563,000

The foregoing estimates are based on the carrying capacity of incoming oil-laden tankers.

BUYING FAIRLY GOOD; SOME STORAGE FULL

(Continued from page 118)

nearly full and may announce an embargo from certain fields unless the oil is moved more freely.

Tankwagon Situation

The tankwagon situation over the territory is generally quite satisfactory. Here and there are soft spots but they are not considered important. The new prices put out by The Texas Company, are an advance so they do not count for any disorganization of the price situation but rather for stabilization. Jobbers, with very few exceptions, report a larger business during May than last year and some of the largest organizations state their business showed an increase of about 15 per cent. The building of filling stations continues. Not only are the small jobbers adding to the number of their outlets but the larger companies are active in picking up sites and building stations. The growth of the city is so rapid and the increase in the number of cars so great that a certain number of new stations would be legitimate. But the increase is beyond these requirements and suggests that part of the program is to secure desirable sites in the directions in which the city is growing and be ready for the car owner when they occupy the new neighborhood. The Standard Oil Co. of Indiana is now ready for the distribution of its ethyl gasoline in this city. The price remains at 3 cents above the price of Red Crown or the regular service station price.

ROCKY MOUNTAIN AREA

(Continued from Page 114)

passing through the Kootenai sand and is now pulling casing.

Runs for the Week	
Salt Creek	50,030
Teapot	1,290
Big Muddy	3,510
Grass Creek	2,970
Elk Basin	620
Greybull	30
Rock River	3,050
Rex Lake	500
Lance Creek	1,740
LaBarge	100
Poison Spider	330
Osage	350
Hamilton Dome	1,280
Lander	300
Byron	40
Lost Soldier	4,390
Simpson Ridge	170
Ferris	110
Cat Creek	2,360
Lake Basin	160
Sunburst	23,000
Florence	350
Moffat	4,750
Tow Creek	105
Fort Collins	2,600
Iles Dome	35
Boulder	25
Rangeley	100
Hogback	440
Rattlesnake	385
Artesia	3,000
Total	109,220

SHREVEPORT MARKET STEADY DURING WEEK

SHREVEPORT, La., June 5.—Increased domestic consumption and another tankwagon raise the first of the week strengthened the Shreveport market fractionally. Refiners had a good steady market most of the week and a market that especially appealed to them. Some closed the week with a spurt in business.

U. S. Motor gasoline found a good, steady demand around 12¼ to 12½ cents. Considerable gasoline was sold at the lower quotation until stocks on storage were reduced and then the market grew firmer. Continued favorable weather along with the seasonal consumption is expected to keep Navy in a firm position. While little 64-66 375 is made in this area, its market was weak and sluggish.

Like Navy, Grade C natural gasoline found a steady demand with prices tight. Spot sales f.o.b. Monroe were reported at 10⅜ to 10½ cents.

Kerosene, the stellar product for so many weeks, has eased off. Little kerosene is available in Shreveport and what was being sold was going from 10⅛ to 10½ cents. Fuel oil remains the firmest of the products. Spot cars were going at the top price when competition from Arkansas and east Texas was shut off. Both distillates and gas oil found firm markets and a fair demand.

In Arkansas conditions were unsettled. Navy was a quarter of a cent higher and moving fairly steadily but many reported concessions kept prices unsteady. Gas oil and distillates moved fairly steadily. Arkansas's kerosene market also eased off and the fuel oil market remained unchanged.

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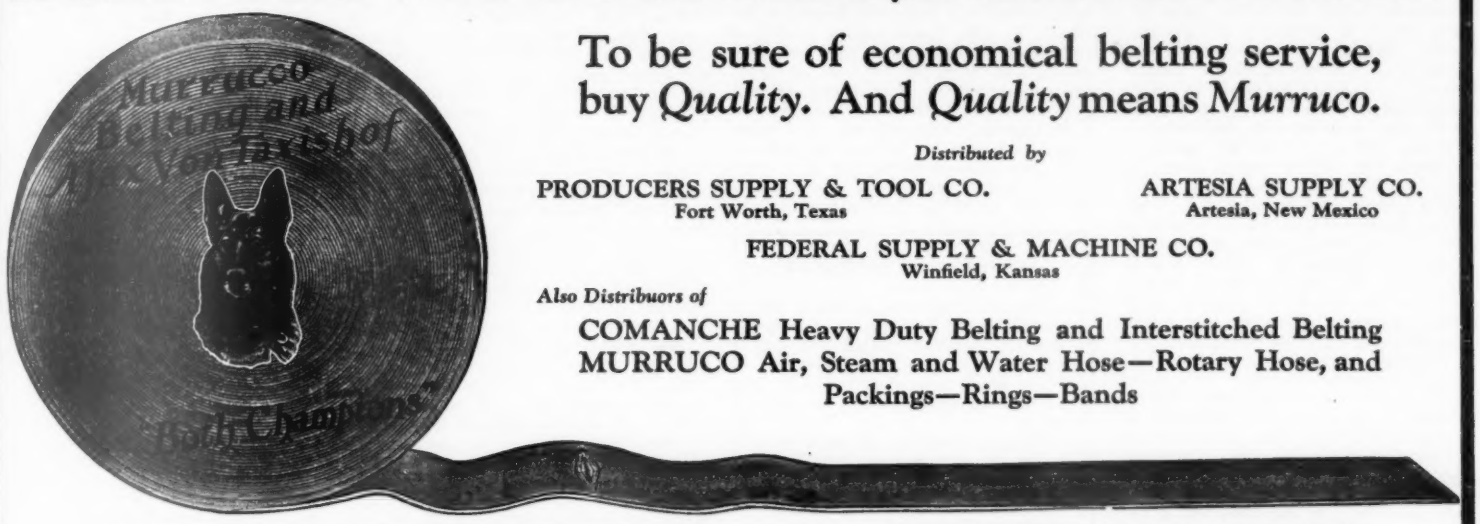

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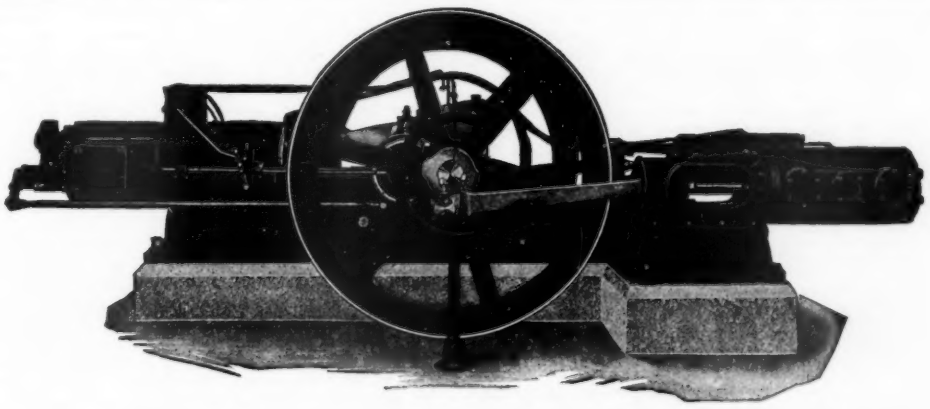

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Main Line Shaft and Belt Transmission

Workable Design of Equipment For Auxiliary Power Explained. Use of Few Clutches or Loose Pulleys Advocated

By Frank P. Peterson

An electric system of transmission, if chosen is deserving of the very best treatment throughout. It must be assumed that the expectation for life of operation is high to justify the larger investment outlay for electric plant and motor drives for details in the auxiliary layout. Six to ten years would be a minimum of time for which the installation would have to transmit its power continuously. Aside from the safety factor the duty demanded of the wiring installation will suggest the best grade of insulation for outside mains, lead, and that these be laid in water-tight underground conduit which latter will insure against injury of the mains in case of plant fire and finally effect the most attractive appearance of plant. All inside circuits for lighting must be in conduit even to the detail circuits up to lighting fixtures. Switches and circuit breakers must all be of the safety type, oil immersed where there is a chance for exposure to gas or oil vapor. The necessity for such rigid specifications has been repeatedly brought out and confirmed by experience and the final conclusion is that an electrical installation, if selected, must be the best that money can secure. Such consideration and the cost involved leads us at once to consideration of the other method, main shaft and belted details.

If the latter must be selected, the same general limits must apply as to excellence of the equipment. In the past, the tendency has been rather general toward an arrangement of shafting which permits one or more gas compressors to be thrown temporarily into auxiliary shaft drive duty, by belting from the compressor while an auxiliary engine may be taken out for repairs or adjustments. Eight out of ten old plants will be found to embody such provision in their layout and operating arrangement. It is obsolete. The amount of power called for to drive auxiliaries, will, as stated above be as much on the average as one of the subdivided units of main compressor equipment. In consequence, when auxiliary duty must, for any reason, be shifted to a compressor unit, it can no longer function as compressor and operation suffers by this reduction of compressor capacity. If a unit of compressor operation may be assumed at 7.5 per cent of the total, and if the daily plant yield may be estimated at as much as 30,000 gallons, and, if the provisional compressor arranged for auxiliary relief may have to do this relief duty for the reasonable average to be expected of 3 per cent of elapsed operating time, and if the value of gasoline to be lost may be set as high as 15 cents per gallon, we may reach the following calculated conclusion: 365 X .075 X .03 X 30,000 X $0.15 = $3,473.86 yearly. Taking all the probabilities of production decline into account, this loss will be obviously too great to be permitted to enter into deliberately calculated design and arrangement of plant.

Stand-By Equipment

The alternative is provision in belted transmission, as in electrical, of full 100 per cent stany-by driver equipment. This can be done in gas engines, of course. It can also be done in another manner, which on examination will be found to approach the ideal. Consider the following outline as a suggestion: Well designed steam engines are known to deliver the most dependable and reliable continuous service of any prime mover with the possible exception of the steam turbine, which latter is hardly to be admitted at this stage of the gasoline industry as practical. Furthermore, certain types of steamers have attained a fuel efficiency, even when operated noncondensing, quite comparably favorable with the gas engine in gasoline plant service. If such a type of steam engine be selected, and with sufficient over capacity to take the auxiliary load and operate at 10 pounds back pressure on its exhaust, utilizing the exhaust, an economy of fuel quite equalling the ordinary gas engine can be had. A low pressure plant-heating system will absorb and return, condensed, to boilers the exhaust from such a steam driven unit at a maximum of over-all power and plant heating efficiency during the entire winter periods.

AUXILIARY EQUIPMENT

The accompanying article is the second by Mr. Peterson on the subject of auxiliary equipment for natural gasoline plants. The previous article appeared in the May 27 iisue of The Oil and Gas Journal.

The two articles are part of a series on the general subject of "Rational Design of Large Natural Gasoline Plants."

Since steam engines are less expensive, considerably horsepower for horsepower, than gas engines and very considerably cheaper to install the difference of investment will be almost, if not quite, sufficient to provide the excess boiler capacity called for. Since large excess boiler capacity is a virtue rather than a misconception, the suggestion seems very logical from an investment point of view. As to its practicability from an operative viewpoint, there can be no discussion. Leave the matter rest, however, as though it were not presented. We are to consider next, the arrangement of equipment of main line shaft and belt transmission of auxiliary power, its design and arrangement.

Arrangement of Main Line Shaft

The transmission to be provided must drive three water pumps, two oil pumps, one electric generator and one air compressor. Much has been said, recently, too, of the matter of clutches and tight and loose pulleys. However ideal this kind of transmission equipment may appear from an operative's safety point of view, its use is so nearly impractical from every other point of view as to condemn it for the hard, grueling service demanded by the gasoline plant. Line shaft coupling clutches are not so much to be avoided as are pulley clutches, although either is bad enough, and while some added safety may be thought to exist in these clutches for the operative who handles them, this is also to be questioned. Always the character of service must be taken into account. It is to be continuous in the full definition of the word. Stops are to be made only for the case of emergency when someone might otherwise be injured, or for the absolute necessity for shifting or repairing a live belt. Clutches carry, of necessity, a multiplicity of bolts, wedges friction shoes, blocks, cams, rivets, sliding collars, yokes, quills, pins, keys, adjusting screws nuts, levers and latches; in fact, not to be too serious, the charter might almost be usefully incorporated into a clutch. We did forget the grease cups. And all these are to be kept going at high relative speeds, day in and day out. Some of the many noted things loosen from vibration and Bang! It goes through whatever it encounters. For safety, encase the clutch, one might suggest. And, no doubt this can be done, to the best advantage with armor plate, be it also said, since the ordinary wire screen called for in inspector's rules can hardly be expected to withstand the shock of, for instance, of a loosened friction shoe, which may weigh several pounds. Due, further, to the "nature of the beast" and its necessary hookup connection to shift levers, it is exceedingly difficult to encase a clutch properly. Access must be had inside of the casing for frequent filling of the grease cups and for less frequent adjustments of friction elements. As a consequence these clutches have been installed and operated in the open and most frequently over head. This writer has, for a longtime, cultivated a habit of stopping or standing aside, out of line with the centrifugal range of all clutches, to the same degree as he has that of a wobbly or run-away fly wheel.

One might smile at this admission. Certainly the plant attendant cannot give much thought to such precautions, and he cannot carry them out in his line of daily routine. But clutches usually rattle and that which rattles suggests, at least, its own treachery. Not much better account can be given of tight and loose pulleys and counter shafting which might be designed to avoid the hazard of contact of the operative with live belts. They do not stand up to continuous service, unless enormous excess capacity is provided against the duty required of them. Since manufacturers of details to be driven do not provide in pulley arrangement for such excess capacity, it is difficult to work such arrangement out at any reasonable cost. The insignificant requirement of the little machine tool or other small detail of belt driven equipment, operated usually very intermittently is quite different. Two or three, or at most, six or eight horsepower is all that is required. As has been seen above, 15 to 30 horsepower is the gasoline auxiliary detail requirement. As a consequence, upkeep expense in clutched equipment is heavy. Proper oiling cannot be effected. Repairs become distractingly frequent. It is to be avoided. To do this there is one rational way. Simplify the arrangement. Use as few clutches or loose pulleys as possible. This so lessens the wear and tear of the transmission equipment as to make necessary shutdowns infrequent. Being infrequent, they can be afforded for such cases as throwing on and off of belts, with the admitted exception in this case of the lighting generator and air compressor.

Description of an ideal layout of belted auxiliary transmission would be best served with an arrangement drawing, were it, at the moment available. It should be possible, however, to so describe the arrangement that the layout man familiar with the subject can readily work it out.

Layout of Auxiliary Transmission

The building to house the installation is best arranged in the form of main floor section and a lean-to side extension, the former to house the drivers, the water pumps, air compressor and electric lighting generator; the latter to receive the battery of oil pumps and their connections. Since overhead shafting will not be proposed, the building structure will call for no special treatment in the weight or vibratory resistance of its structural members. Forty feet will be found to be ample width for main building even for horizontal type engines, and 18 to 20 feet also ample for the lean-to section. Horizontal engines will be found to be favored. Two drivers are sufficient, each to be capable of handling all the load. Two gas engines are permissible but, as suggested above, one gas and one steam engine will make the most desirable arrangement.

The engines are to be located at or near each end of the main floor section. Of course the engines must be capable of governing closely to the same speed, and this speed is preferably as high as 220 revolutions per minute. The engine crankshafts are to be set in true alignment, one with the other and at an elevation not les than about three feet from floor surface line. The engines are to be arranged, one for left, and one for right-hand drive. Single flywheel types, with extended shaft supported by outboard bearings are suitable.

The arrangement will place the drivers on main floor level, spaced sufficiently apart that the shaft line may be interposed between the two engines and direct coupled to either by means of rugged, dependable d e n t a l clutches. Shafting must be of ample dimensions. It will be mounted in self-oiling bearings of approved type. Roller bearings are rather too refined to attempt to put them into this type of service. They are admittedly ideal once they are drilled into service. But the successfully conceived and constructed gasoline plant is expected to keep moving without hindrance from the very hour of first delivery of gasoline into the stock tanks. Nine such cases out of 10 will catch the erection of line shaft equipment lagging up to the zero hour of jumping off with operation. Bearing shells of the ordinary type are quickly replaced, if one happens to go bad.

Location of Water Pumps

The shaft line will be hung on substantial floor stands, or adjustable pillow blocks set on neat concrete piers. Forward of the floor limits of the drivers, sufficiently for passageway in front of them, will be located the water pumps and the air compressor and electric generator. The water pumps only are to be located on a sub-floor level to be not less than 7 feet 6 inches below main floor line. On a coping which terminates the rise of inside retainer wall for the excavated water pump sump, a line of heavy railing will provide ample safety in this floor arrangement. Over and across the top of this sump, a light bridge runway will be provided for the belt position of each oil pump. The runway properly railed for protection against the belt and also for use as a bridge will serve ideally as belt guard and bridgeway between line shaft and main floor section and lean-to oil pumproom section. The main wall line of engine room building will be also retainer wall of the water pump sump, its extension above oil pump floor line being sufficient to protect the water pump pit against the spilling therein of oil from oil pump room. If desired, the wall line may be finished as a partition between main and oil room divisions, with belt ports and doors cut in, but this should hardly be found necessary. Belt lines for the oil pumps may be easily positioned clear of the supporting columns of the main wall line of the engine r o o m section. This arrangement will be found to give, without cramping or crowding of the machinery, very liberal belt center distances, so that with loose belts as soon as they are run to good adhesive contact, arcs of more than 180 degrees will be had. The drive will be in the right direction. Belt service will be as nearly perfect as it can be made, with bearing pressures at a consequent minimum and long life and low maintenance cost may be anticipated. It will be also quite practical in this arrangement to encase in mesh screens the pulley ends of these long belts, with their intervening flank strings properly railed

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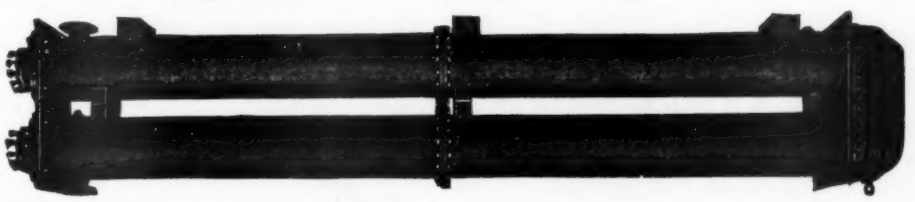

The G-R Mineral Seal Oil Heat Exchanger

is designed so that the saturated and unsaturated oils flow through the heater in opposite directions, resulting in maximum rate of heat exchange.

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These advantages and the features of construction of the G-R Mineral Seal Oil Heat Exchanger are explained in leaflet which will be sent on request.

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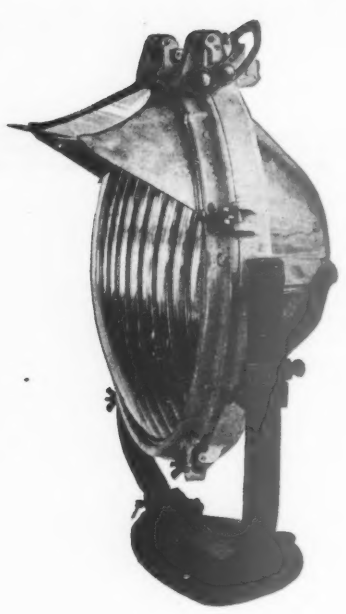

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for safety, the whole combination easily accessible for repairs. Indeed, after the first run-in and adjustment period is passed, very little repair and maintenance attention will be required for such an installation.

A trial layout of this scheme will unfold to the engineer very pleasing and practical results. Ample space will be found in the main engine room floor for the placing on the upper level of air compressor electric generator and switch board. The main floor area between power ends of the drivers will be capacious, and the room will have a very sightly and inviting aspect. All details of equipment will be found to locate ideally for access and convenience of repairs when same are required. And, finally, the cost of the finished installation will be found to be below that of the overhead, clutched and platform railed arrangement.

No Friction Clutches

It is not to be forgotten that in proposing the arrangement, we have deliberately departed from all thought of employing friction clutches or counter shafts with tight and loose pulleys for pump details. In the arrangement we accept the conclusion that we will have reached a degree of dependability in the transmission that may insure almost entirely continuous service, and this will be realized, so far as the transmission is concerned. It is not necessary to remind the engineer that his workmanship in both design and construction must be reasonably faultless. His engines should have foundations that are substantial. He may not take the chances with these he would with direct connected compressors, or even electric generators direct connected. After the auxiliary drivers are placed and grouted, and after the foundation setting has seasoned sufficiently to permit this rigorous course, the engines should be driven to their safe speed limits, light, raced and throttled repeatedly, the foundation bolts thoroughly tightened, etc. Such treatment will shake and settle the driver into its permanent position. The shaft may now be connected up through its dentals, finally adjusted nicely in true bearing alignment. Again the engines, first one and the other, should be rather vigorously handled with the line shaft connected. After this course of treatment and a final adjustment of bearing alignment the assembly may be put into operation under load with but little fear of difficulty arising.

Modern well designed equipment need not be described with reference to necessary bearing areas; they will be sufficient, but for the load suggested of approximately 160 horse power, a cold rolled steel shaft diameter, d, in inches, equal to $\frac{\sqrt[3]{60\times160}}{200}=3.34''$ or the nearest nominal diameter size 3 7-16 inches, will be large enough, provided bearings are spaced not more than eight feet apart, and pulleys mounted reasonably close, not more than 24 inches from ends of bearing shells.

With regard to electric generator and air compressor details, these require special treatment due to their usual daily intermittent service. About the best arrangement for these is light and loose pulleys located at the driven end on liberal sized extension of shaft, this extension to be well supported in an out-board bearing. If loose belts are used for these drives, and when good belt surfaces are attained, this can be done, the equipment will be found quite dependable. Operators must be trained, however, carefully and rigidly to oil thoroughly the loose pulley bearings daily. Belt guards must have hinged openings to permit this attention and they should be liberally roomy to make for greatest safety in the attention called for. It will thus be possible to stop the loose pulley and oil it thoroughly one or more times during each daily period when the tight pulley is in service. Perference may be found in the minds of some layout men for a counter shaft for this detail of duty. Tight and loose pulleys may be mounted on the counter shaft, but an over pull belt will be the result. This is bad practice. The least desirable arrangement and probably the one least serviceable would be the clutched pulley drive.

COMPANY TO OPERATE IN EDGINGTON AREA

SAN ANTONIO, Tex., June 5.—George M. Ball of Baltimore, Md., who entered the Mirando Field a year ago and has twice extended the field south of the Aviators Field, has disposed of an interest in part of his holdings there and has incorporated the Mar-Tex Oil Co. to operate part of the leases. Heretofore he has been developing the property as an individual.

The Mar-Tex Oil Co. is incorporated for $440,000 and will operate Blocks 73 and 74 in the Edgington subdivision of the Puig Brothers Survey. George M. Ball is president, W. F. Mylander of Baltimore, Md., vice president; E. C. Roberts of San Antonio, secretary and treasurer, and H. I. Warren, assistant secretary. Directors are George M. Ball, R. H. Cummins and W. F. Mylander, all of Baltimore; Marshall Eskridge and Alex P. Villaret of San Antonio.

Mr. Ball has sold a half interest and the working interest in the 80 acres in the west half of Block 45 of the Bruni tracts with one well completed and another drilling, to Murchison & Fain. The well completed on the lease extended the field a mile to the south when it was brought in. Mr. Ball also sold a half interest in the north half of the east half of Block 13 of the Bruni tracts with the working interest to Murchison & Fain and a half interest in the south half of the east half of Block 13 to Mr. and Mrs. R. E. Kennedy of Wichita Falls. Mr. Ball's well on Block 13 extended the field a half mile to the east. The well is on the north half of the east half of 13 in which Murchison & Fain bought the half and working interest and the second well on that block is now drilling.

The Mar-Tex Oil Co. will at once drill six more wells on Blocks 73 and 74 of the Puig Brothers tracts on which George M. Ball has already completed several producers.

The consideration in the two sales of half interest in the 160 acres in Blocks 13 and 45 totaled around $150,000 with a producing oil well completed and one drilling in each block.

ANGLO-AMERICAN HEAD REPORTS ON BUSINESS

F. E. Powell, chairman of Anglo-American Oil Co., in remarks to stockholders at the annual meeting stated that business in 1925 continued to increase and results would have been better but for the sudden increase in gasoline prices in America during the first half of the year, while the selling price in Great Britain remained unchanged. Stocks of oil are the same as last year in value and quantity.

Business to the end of April was satisfactory, with sales of lubricating oil for distribution to mills and factories, the best trade barometer, an encouraging sign of slow but sure revival of trade.

The British strike upset all calculations and it is difficult to make predictions for the current year. Demand for gasoline during the strike, which was very heavy, was successfully met and the company co-operated with the government to maintain transport. Other branches were less active, but not entirely closed.

OKO TO EXTEND OPERATIONS

LIMA, Ohio, June 5.—Capital stock of the Oko Oil & Gas Co. was increased by $500,000 at a meeting of the stockholders in the offices of President M. P. Colt, making the total capital $1,000,000. Additional properties will be purchased with the increased capital, with a wider expansion of the holdings in Ohio, Kansas and Oklahoma. Besides Colt, who is president, officers are, M. J. Lynch, vice president; H. E. Myers, secretary-treasurer, with C. M. Tolan and W. L. Parmenter as associate members.

FIFTY POOLS IN THE 10,000-BARREL CLASS BUT AVERAGE IS FALLING

The 50 pools in the United States that averaged 10,000 bbls. a day in the production of crude during April, 1926, produced an aggregate average daily production in that month of 1,406,609 bbls. The same pools in April, 1925, averaged 1,479,810 bbls. and in April, 1924, 1,474,781 bbls.

Four pools that were in the 10,000-bbl. class in April, 1925, were absent from the list of 50 leading pools in April this year. These included Wortham, Tex., which had fallen from 58,998 bbls. a day in April last year to 9,048 bbls. a day in April this year; West Columbia, Tex., which had fallen from 14,366 bbls. to 9,405 bbls.; Richland, Tex., from 15,331 bbls. to 1,481 bbls. Three fields which were in the 10,000-bbl. class in April, 1924, were out of the list in April last year and this year. These were El Dorado, Ark.; Breckenridge, Tex., and Goose Creek, Tex.

In a list that includes all the fields in the 10,000-bbl. list in April, 1924, 1925 or 1926, including 57 pools, the total average production per day in April, 1926, was 1,454,551 bbls. in April, 1925, 1,609,021 bbls. and in 1924 1,524,169 bbls.

Six pools in the list in April this year had not been opened two years before. There were fifty 10,000-bbl. pools in April, 1926; 45 in April, 1925, and 39 in April, 1924.

The fifty 10,000-bbl. pools in April, 1926, produced an average of 1,406,609 bbls. The 45 pools of that class in April, 1925, produced 1,541,665 bbls. and the 39 10,000-bbl. pools in 1924 averaged 1,482,202 bbls. per day, which indicates a lower average of production per pool in April this year than in April of the two previous years.

The following figures show the comparative production of all the 57 pools which have figured in the 10,000-bbl. class in April of one or more of the three years:

LEADING OIL POOLS IN UNITED STATES

Pools Averaging 10,000 Bbls. a Day or More in April, 1926

Rank April 1926	Field	April 1926 Bbls.	April 1925 Bbls.	April 1924 Bbls.
1	Smackover, Ark., heavy	134,084	208,411	*113,265
2	Long Beach, Calif.	109,561	112,382	175,844
3	Midway-Sunset, Calif.	94,238	101,992	99,137
4	Salt Creek, Wyo.	54,114	58,998	95,595
5	Inglewood, Calif	51,790	3,597	None
6	Santa Fe Springs, Calif.	49,076	52,262	72,713
7	Huntington Beach, Calif.	44,238	42,212	51,362
8	Burbank, Okla.	42,470	59,034	105,864
9	Tonkawa, Okla.	37,699	70,856	35,291
10	Garber, Okla.	37,258	8,105	5,153
11	Wewoka, Okla.	36,827	12,464	7,605
12	Archer, Tex.	35,012	39,649	33,616
13	Ventura-Newhall, Calif.	33,530	21,578	11,157
14	Elk Hills, Calif.	32,680	37,626	36,697
15	Big Lake, Tex.	32,487	16,799	203
16	Powell, Tex.	30,799	51,332	117,157
17	Torrance, Calif.	29,571	38,417	54,801
18	Bristow, Okla.	23,541	25,935	45,666
19	Luling, Tex.	22,710	29,403	28,850
20	Coalinga, Calif.	21,011	21,640	37,175
21	Dominguez, Calif.	21,009	45,195	7,229
22	Hull, Tex.	20,750	15,331	22,084
23	Cushing-Shamrock, Okla.	20,585	21,584	24,410
24	Sunburst, Mont.	20,033	3,273	3,205
25	Teeter-Pixley, Kans.	19,984	8,702	1,127
26	Cromwell, Okla.	18,413	42,866	6,540
27	Rosecrans, Calif.	18,052	18,117	None
28	Montebello, Calif.	17,992	18,874	16,624
29	Fullerton, Calif.	17,969	11,345	10,728
30	Smackover, Ark., light	17,310	30,776	See Note
31	Coyote, Calif.	17,085	20,361	15,325
32	Davenport, Okla.	17,082	2,575	None
33	Electra, Tex.	16,679	17,158	20,123
34	Bradford, Pa.-N. Y.	16,000	15,750	14,650
35	Mexia, Tex.	15,791	19,230	32,955
36	Healdton, Okla.	14,920	15,493	16,768
37	Seely, Kans.	13,175	6,874	5,449
38	Richfield, Calif.	12,796	10,785	12,672
39	Braman, Okla.	12,782	2,585	None
40	Graham-Fox, Okla.	12,287	11,054	20,062
41	Burkburnett, Tex.	12,281	14,843	20,499
42	Papoose-Gilcrease, Okla.	12,252	25,142	None
43	Hewitt, Okla.	12,047	15,201	19,769
44	Kern River, Calif.	11,947	17,854	19,266
45	Orange, Tex.	11,552	13,124	12,967
46	Mounds-Beggs, Okla.	10,977	11,316	11,078
47	Yale-Ingalls, Okla.	10,820	4,504	5,456
48	Caddo, La.	10,776	11,693	11,929
49	Hutchinson County, Texas	10,369	758	None
50	Haynesville, La.	10,198	13,855	16,715
	Total 50 pools	1,406,609	1,479,810	1,474,781

*Smackover production in April, 1924, includes heavy and light crude.

Pools in 10,000-Bbl. Class in April, 1925 or 1924

	April 1926	April 1925	April 1924
Wortham Tex	9,048	58,998	None
West Columbia, Tex.	9,405	14,366	12,792
Richland, Tex.	1,481	15,331	None
South Liberty, Tex.	5,545	14,133	None
El Dorado, Ark.	7,376	9,321	12,800
Breckenridge, Tex.	5,955	8,043	12,567
Goose Creek, Tex.	9,132	9,019	11,229
Grand total of 57 pools	1,454,551	1,609,021	1,524,169

I-R Portable Compressors

Ingersoll-Rand Portable Air Compressors and Tools have been adopted by hundreds of contractors and companies as the most economical machines for use in the field.

These air compressors and tools have been found to give the reliable and efficient service so necessary where work is being done in the field, far from any repair shop or tool room. On work where delays or interruptions would mean big losses, and must be avoided, you will find Ingersoll-Rand Outfits on the job.

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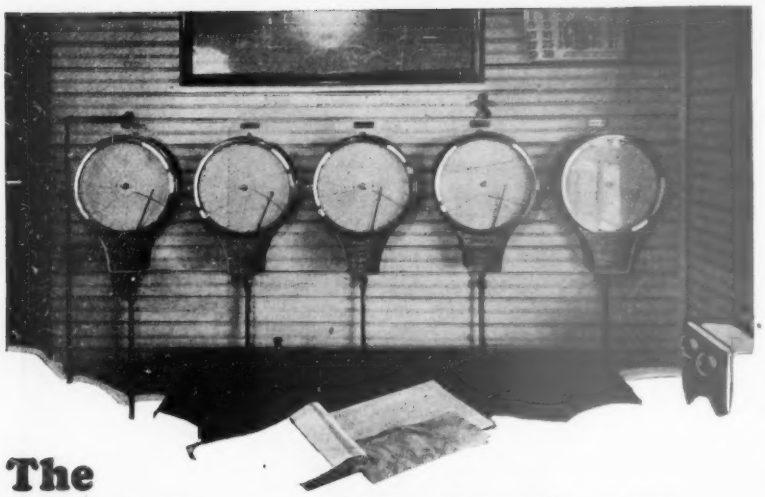
Ingersoll-Rand

High Pressure Portable Compressor



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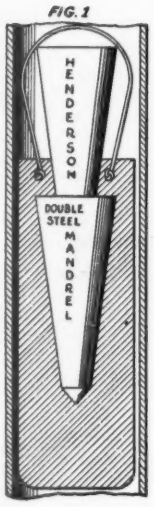
HENDERSON-DOUBLE-STEEL-MANDREL LEAD-PLUG

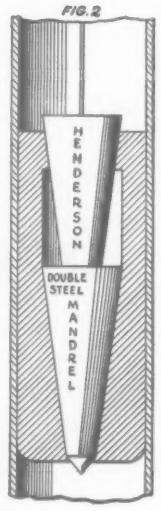
FIG. 1



Patent Applied For

Something new and superior to any plug on the market, in that the double mandrel will expand the lead body for its entire length, while a single cone mandrel type will expand the lead body only at the top. A little study of the cut which shows before and after will convince the practical producer of the advantage of the double mandrel.

FIG. 2



Manufactured by

The McJunkin Supply Company

Charleston, W. Va.

GULF PORT SHIPMENTS DECLINE 853,205 BARRELS DURING APRIL

By P. L. McGreal

HOUSTON, Tex., June 5.—Shipments by water from Gulf ports of refinery products total 8,557,291 bbls. during the month of April, which is a decrease of 1,466,412 bbls. from that of March. Total crude shipments by tankers were 5,707,070 bbls., an increase of 613,207 bbls. compared with April. The net decrease of refinery products and crude is 853,205 bbls. from the record for April.

Consignment from refineries and terminals in the Port Arthur-Beaumont district total more than 50 per cent of the gross. The plants at Texas City and along the Houston ship channel contributed a trifle more than one-third of the total.

The Humble Oil & Refining Co. leads with a total of 3,143,004 bbls. The Gulf Refining Co. is next, although its tanker consignments declined 479,863 bbls. from March. The Standard Oil Co. of Louisiana declined 826,631 bbls. from its March record. Both The Texas Company and Magnolia show declines compared with March.

Export consignments of refinery products increased 101,128 bbls. over March and crude fell off 486 bbls.

The following table gives the shipments in detail by each company, the Sun Co., Vacuum Oil Co. and Deepwater Refineries not being represented for April:

FROM PORT ARTHUR
By The Texas Company

Refined	
Coastwise	1,194,236
Export	221,168
Total	1,415,404
Crude	
Coastwise	255,026

By Gulf Refining Co.

Refined	
Coastwise	2,035,526
Export	265,304
Total	2,300,830
Crude	
Coastwise	270,445

FROM BEAUMONT
By Magnolia Petroleum Co.

Refined	
Coastwise	*1,460,021

*Makes no division of shipments.

FROM ATRECO
By Atlantic Oil Producing Co.

Refined	
Coastwise	194,746
Crude	
Coastwise	262,039

FROM PORT ARTHUR
By Atlantic Oil Producing Co.

Crude	
Coastwise	241,297

FROM SMITH'S BLUFF
By Atlantic Oil Producing Co.

Crude	
Coastwise	49,052

FROM NECHES TERMINAL (Orange)
By Humble Oil & Refining Co.

Crude	
Coastwise	62,686

FROM TEXAS CITY
By Humble Oil & Refining Co.

Crude	
Coastwise	1,097,391

By Marland Oil Refining Co.

Refined	
Export	162,067
Crude	
Coastwise	785,756

FROM BAYTOWN (Refinery)
By Humble Oil & Refining Co.

Refined	
Coastwise	507,940
Export	725,337
Total	1,233,277
Crude	
Coastwise	695,588
Export	54,062
Total	749,650

FROM HOUSTON (Pasadena)
By Crown Central Petroleum Co.

Crude	
Coastwise	†76,881

†Account Phillips Petroleum Co.

FROM HOUSTON (Galena)
By Galena Signal Oil Co. of Texas

Refined	
Coastwise	76,000
Export	128,000
Total	204,000

FROM HOUSTON (Sinco)
By Sinclair Oil Refining Co.

Refined	
Coastwise	302,106
Export	82,999
Total	385,105
Crude	
Coastwise	386,816

FROM HOUSTON
By Keen & Woolf Oil Co.

Refined	
Export	42,000

FROM BATON ROUGE (Refinery)
By Standard Oil Co. of Louisiana

Refined	
Coastwise	938,733
Export	221,108
Total	1,159,841
Crude	
Coastwise	1,470,031

SUMMARY

Shipments of refined and crude from Gulf Ports During April, 1926

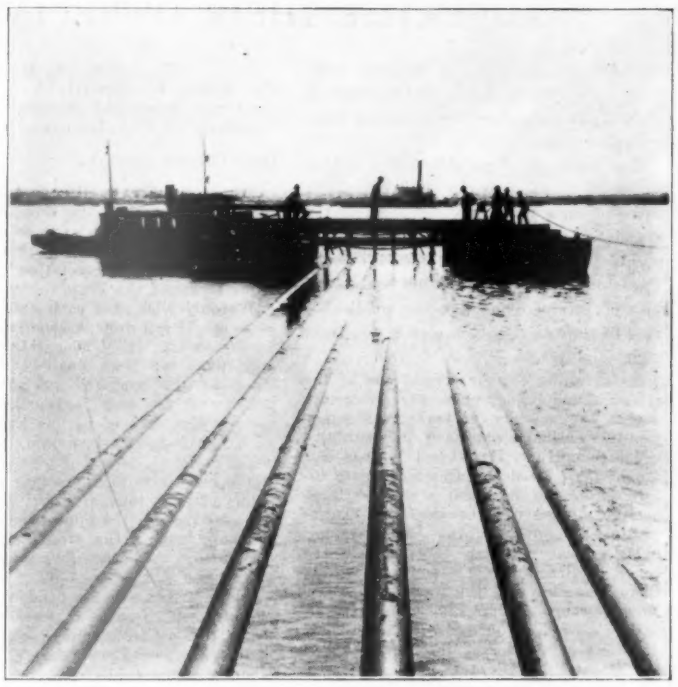
Company and port—	Refined	Crude	Total
The Texas Company, Port Arthur	1,415,404	255,026	1,670,430
Gulf Refining Co., Port Arthur	2,300,830	270,445	2,571,275
Magnolia Petroleum Co., Beaumont	1,460,021	.....	1,460,021
Atlantic Oil Producing Co., Atreco	194,746	262,039	456,785
Atlantic Oil Producing Co., Port Arthur	.....	241,297	241,297
Atlantic Oil Producing Co., Smith's Bluff	.....	49,052	49,052
Humble Oil & Refining Co., Neches	.....	62,686	62,686
Humble Oil & Refining Co., Texas City	.....	1,097,391	1,097,391
Marland Oil & Refining Co., Texas City	162,067	785,756	947,823
Humble Oil & Refining Co., Baytown	1,233,277	749,650	1,982,927
Crown Central Petroleum Co., Houston	.....	76,881	76,881
Galena-Signal, Houston	204,000	.....	204,000
Sinclair Oil & Refining Co., Houston	385,105	386,816	771,921
Keen & Woolf, Houston	42,000	.....	42,000
Standard Oil Co. of Louisiana, Baton Rouge	1,159,841	1,470,031	2,629,872
Totals for April	8,557,291	5,707,070	14,264,361
Totals for March	10,023,703	5,093,863	15,117,566
Difference	1,446,412	613,207	853,205

Export Consignments

The Texas Company, Port Arthur	221,108	.....	221,108
Gulf Refining Co., Port Arthur	255,026	.....	255,026
Marland Oil & Refining Co., Texas City	162,067	.....	162,067
Humble Oil & Refining Co., Baytown	725,337	54,062	779,399
Galena-Signal, Houston	128,000	.....	128,000
Keen & Woolf, Houston	42,000	.....	42,000
Standard of Louisiana, Baton Rouge	221,108	.....	221,108
Totals for April	1,754,646	54,062	1,808,708
Totals for March	1,653,518	53,576	1,707,094
Difference	101,128	486	101,614

Domestic Exports of Petroleum and Refined Products

	Month of April		10 Months Ended April	
	1925	1926	1925	1926
Crude petroleum ..... Gals.	32,557,257	54,917,222	513,343,914	462,147,250
$	1,582,222	2,292,031	19,085,864	20,632,507
Total refined petroleum ..... Gals.	336,680,745	413,244,799	3,262,061,396	3,483,222,473
$	37,319,792	46,122,825	326,005,196	374,215,888
Gasoline, naphtha and other light products ..... Gals.	103,956,017	179,504,125	1,009,218,989	1,344,878,036
$	16,735,890	26,062,347	141,057,956	187,382,698
Illuminating oil ..... Gals.	80,271,002	67,704,079	767,298,291	755,247,926
$	7,783,604	7,597,977	72,425,614	72,460,158
Gas and fuel oil ..... Gals.	114,368,786	127,510,405	1,174,350,127	1,162,702,971
$	4,252,894	3,805,953	42,606,905	38,093,760
Lubricating oil ..... Gals.	37,890,021	37,747,037	308,168,269	323,456,828
$	8,502,834	8,507,504	69,463,175	74,414,743
Other refined petroleum products.. Gals.	194,919	779,153	3,025,720	5,936,712
$	39,570	149,044	421,516	864,524
Paraffin wax ..... Lbs.	24,627,462	31,560,107	288,493,477	292,413,362
$	1,393,490	1,816,759	15,489,756	16,394,719



NO-OX-ID
IRON + OX = RUST
TRADE MARK
The Original Rust Preventive

Across San Jacinto Bay

The Houston Pipe Line Company ran six 10-inch pipe lines across San Jacinto Bay recently. They were coated with NO-OX-ID "A" Special. The distance was over half a mile (2650 feet) and the pipes were lowered 45 feet below mean tide—a case of good engineering both in the laying and in the protection employed.

This is one of the many pipe line jobs totaling millions of feet on which NO-OX-ID has been employed in the oil districts. NO-OX-ID acts chemically in stopping and preventing pitting and corrosion.

Full data on request with references direct to extensive users of the product. Write!

Dearborn Chemical Company
310 S. Michigan Ave., Chicago 229 Broadway, New York

THE OIL INSURANCE ASSOCIATION

PROVIDES FOR REAL FIRE INSURANCE FOR THE OIL INDUSTRY

The Oil Insurance Association is in its eighth year of successful operation, with 100% performance record testifying to the dependability, thrift and speedy and complete satisfaction of its service.

OIL INSURANCE ASSOCIATION MEMBER COMPANIES

Aetna Insurance Co., Hartford, Conn.
American Insurance Co., Newark, N. J.
American Alliance Ins. Co., New York, N. Y.
American Central Ins. Co., St. Louis, Mo.
American Eagle Fire Ins. Co., New York, N. Y.
Alliance Insurance Co., Philadelphia, Pa.
Automobile Ins. Co., Hartford, Conn.
Ben Franklin Underwriters, Pittsburgh, Pa.
Boston Insurance Co., Boston, Mass.
California Ins. Co., San Francisco, Cal.
Camden Fire Ins. Ass'n., Camden, N. J.
Central States Fire Ins. Co., Wichita, Kans.
Citizens Insurance Co., St. Louis, Mo.
City of New York Ins. Co., New York, N. Y.
Columbia Ins. Co. of Jersey City, N. J.
Commercial Union Assurance, London, Eng.
Commonwealth Ins. Co. of New York, N. Y.
Connecticut Fire Ins. Co., Hartford, Conn.
Continental Insurance Co., New York, N. Y.
County Fire Ins. Co., Manchester, N. H.
Fidelity Phoenix Fire Ins. Co., New York, N. Y.
Fire & Marine Underwriters, Hartford, Conn.
Firemens Fund Ins. Co., San Francisco, Cal.
Firemens Insurance Co., Newark, N. J.
Firemens Underwriters, Newark, N. J.
Franklin Insurance Co., Philadelphia, Pa.
Girard Fire & Marine Ins. Co., Philadelphia, Pa.
Girard Underwriters, Philadelphia, Pa.
Glens Falls Insurance Co., Glens Falls, N. Y.
Great American Ins. Co., New York, N. Y.
Hanover Fire Ins. Co., New York, N. Y.
Harmonia Fire Insurance Co., Buffalo, N. Y.
Hartford Fire Ins. Co., Hartford, Conn.
Home Fire & Marine Ins. Co., San Francisco, Cal.
Home Insurance Co., New York, N. Y.
Hudson Insurance Co., New York, N. Y.
Imperial Assurance Co., New York, N. Y.
Insurance Co. of North America, Phila., Pa.
Insurance Co. of State of Pennsylvania, Phila., Pa.
Jersey Fire Underwriters, Newark, N. J.
Liverpool & London & Globe Ins. Co., Liverpool, England.
Mechanics Insurance Co., Philadelphia, Pa.
Mechanics Underwriters, Philadelphia, Pa.
Mercantile Insurance Co., New York, N. Y.
National Ben Franklin Fire Ins. Co., Pittsburgh, Pa.
National Fire Ins. Co., Hartford, Conn.
National Security Fire Ins. Co., Omaha, Neb.
New Hampshire Fire Ins. Co., Manchester, N. H.
New York Underwriters Agency, New York, N. Y.
Niagara Fire Ins. Co., New York, N. Y.
North British & Mercantile Ins. Co., London, Eng.
Norwich Union Fire Ins. Soc., Norwich, Eng.
Palatine Insurance Co., London, England
Patriotic Insurance Co. of America, New York, N. Y.
Pennsylvania Fire Ins. Co., Philadelphia, Pa.
Philadelphia Fire & Marine Ins. Co., Phila., Pa.
Phoenix, Assurance Co., London, England.
Phoenix Insurance Co., Hartford, Conn.
Providence Washington Ins. Co., Providence, R. I.
Queen Insurance Co., New York, N. Y.
Reliance Insurance Co., Philadelphia, Pa.
Rochester Dept. Gt. American, New York, N. Y.
Royal Exch. Assurance Co., London, Eng.
Royal Ins. Co., Ltd., of Liverpool, Eng.
Scottish Union & Nat. Ins. Co., Edinburg, Scotland
Security Ins. Co., New Haven, Conn.
Springfield Fire & Marine Ins. Co., Springfield, Mass.
St. Paul Fire & Marine Ins. Co., St. Paul, Minn.
Sun Insurance Office, London, England
Svea Fire & Life Ins. Co., Gothenburg, Sweden
Union Assurance Society, London, England
Union Ins. Soc. of Canton, Hong Kong, China
World Fire & Marine Ins. Co., Hartford, Conn.

Complete details of the Oil Insurance Association may be obtained from your insurance agent or broker.

AMONG THE PURPOSES FOR WHICH THE OIL INSURANCE ASSOCIATION WAS ORGANIZED ARE:

To enable oil operators to secure sufficient dependable insurance to adequately protect their interests.
To furnish property holders and those controlling oil business expert engineering and inspection service, so methods of insuring this class may be standardized, and efficient fire protective devices installed and properly maintained, thereby stabilizing the business to the point which will enable insurance companies generally to accept the class at fair cost and under equitable policy rates.
To make available the most business-like insurance arrangement for all oil companies.

OIL INSURANCE ASSOCIATION - H. M. Carmichael, Mgr. - 209 W. Jackson Blvd., Chicago

Figure low on pipe!

Figure *low* first-cost — *low* installation — *low* maintenance. Line investment and upkeep are drastically cut by engineers and purchasing agents who know Greenspon's pipe values.

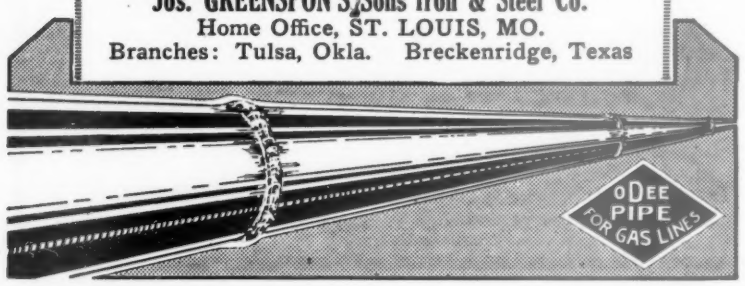
ODEE Pipe for Gas Lines

carries our guarantee of utmost service, at prices that save you 1/3 or more. Furnished in double joints, it saves approximately 50% in welding and installation cost.

TERMS TO SUIT: With a reasonable down payment, the line can be paid for out of income, in place of full cash payment out of capital.

We can render real service on used line pipe and oil well casing of merit, from Tulsa, Okla., Breckenridge, Texas, or St. Louis.

Jos. GREENSPON'S Sons Iron & Steel Co.
Home Office, ST. LOUIS, MO.
Branches: Tulsa, Okla. Breckenridge, Texas



OTHER "PENBERTHY" PRODUCTS

Ejectors
Cellar Drainers
Oil Gages
Water Gages
Oil Cups
Grease Cups, Etc.

PENBERTHY PRODUCTS

Special High Pressure Automatic Injector

Owing to the increasing demand in the oil fields for injectors to operate on higher pressures, this high pressure injector is recommended where boilers are operated at pressures to 200 pounds.

Write For Catalog

PENBERTHY INJECTOR COMPANY
Established 1886

Canadian Plant:
WINDSOR, ONT., CAN.

1260 Holden Ave.,
DETROIT, MICH.

EMPLOYES OF INDIANA COMPANY ADVERTISE THEIR APPRECIATION

Under the heading, "A Singular Full-Page 'Ad'," the St. Louis Globe-Democrat of May 22, published the following leading editorial:

The members of as interesting a delegation as has visited the Globe-Democrat office in some time were employes of the Standard Oil Co. of Indiana, working at the Woodriver refinery on the East Side. The thing they had in mind was some way of making known to the public the kind of treatment they are receiving from their employer.

As a result of their errand one of the most singular full-page advertisements within the memory of many newspaper men of experience appeared in Saturday's Globe-Democrat. Publicity was not sought for offered bargains looking to future gains, as is usual when so large amount of space is bought. The unconventional "copy" for the advertisement, in fact, was a letter addressed to the board of directors of the company telling them what a great thing the "employes' stock purchasing plan" has proved to be, and signed by the heads of the nine divisions of the force and nearly 600 of the workmen. "We only wish that each and everyone of us could tell you personally how good we feel about it," is one sentence in the letter.

General references to this purchase plan have been printed in the press from time to time, but the way it has worked out during the 5-year period affords sound reason for "feeling good about it." For every dollar furnished by the men up to 20 per cent of their salaries for buying stock, the company added 50 cents. This alone was the equivalent of a 10 per cent increase in wages. However, it was much better than an increase in pay, to be spent, probably, before the next pay day. This was wages saved, to which the company added a generous one-half, so that those who took advantage of the full possibilities put away against a rainy day and old age an amount equal to 30 per cent of their earnings. Then, too, the men had the benefit of the dividends on the stock while they were paying for it and, furthermore, probably the stock is now worth more than the price at which it was purchased. Anyway a computation shows that for every dollar put in the pot out of his wages, each man now has $2.26.

The idea of publishing the remarkable advertisement originated with the men themselves and they paid for it out of their own pockets. From it a glimpse is obtained of the varied activities carried on at a modern refinery by those who operate crude stills and steam stills and pressure stills and cranes and locomotives and paraffin works and tin shops and laboratory and restaurant. There are carpenters, boilermakers, machinists, electricians, brass founders, blacksmiths, temperature men, even a clock man.

Isn't something to be said for a plan that makes capitalists out of a body of wage workers, who probably include the usual ratio of those who are careless with their money? Company employes in St. Louis City alone are said to have a net gain of $668,000 on a total of $581,000 invested and the total stock purchased throughout the country under the plan is placed at $25,350,000.

And, of course, the finest thing of all is the appreciation and general attitude of these men—the sentiments which are "the true sentiments of every employe," as the advertisement says. The plan has increased the morale of the men and their loyalty to the company, says one of the local managers. One might conjecture that it would.

The advertisement which occupied a full page in the Globe-Democrat read as follows:

An open letter to the board of directors of the Standard Oil Co. (Indiana) from the employes of its Woodriver, Ill., refinery.

Woodriver, Ill., May 22, 1926

Col. Robert W. Stewart,
Chairman, Board of Directors,
Standard Oil Co. (Indiana).

Dear Colonel Stewart:

To commemorate the termination of the 5-year period of the Employes' Stock Purchasing Plan, we want to express to the Board of Directors, by this open letter, our heartfelt appreciation of the generous terms of the Plan.

We only wish that each and every one of us could tell you personally how good we feel about it. Under this Plan, not only have we been enabled to acquire stock in the company at an equitable price and on easy payments, but for every dollar each of us has paid into the Plan the company has paid in a bonus of 50 cents.

We certainly do appreciate the liberal terms of this unusual Plan, whereby we have been given the opportunity to share so generously in the profits of the great corporation we work for, and we want ot tell the world about it.

These are the true sentiments of every employe whose name appears in the list below. There isn't enough space on this page or we would print each signature instead of using cold type.

Respectfully and gratefully yours,

(The names of 590 employes followed.)

Inserted in the advertisement was the following:

This letter of appreciation comes from the heart. It is purely the spontaneous expression of the Woodriver Refinery employes whose names appear on this page and who have paid for the space by their voluntary contributions. The idea of printing the letter in the Globe-Democrat was conceived and the plan carried out by these employe-elected representatives of the Joint General Committee:

Division No. 1—L. P. Pierce, representing: Crude Stills, Steam Stills, Refinery Agitators, Main Pump House, Gas System, Crude Still Labor, Boiler Houses, 1 and 2, Temperature Man, Experimental Stills, Power House, Water Station.

Division No. 2—George H. Wilken, representing: Pressure Stills, Pressure Ash System, Crude Ash System.

Division No. 3—Alex Kondas, representing: Crude Still Cleaners, Fire Marshal, Clock Repair Man, Refinery Labor, Pressure Still Labor, Pressure Still Cleaners.

Division No. 4—William E. Kelly, representing: Cranes and Locomotives, Boilermakers and Helpers, Bricklayers and Helpers.

Division No. 5—Joseph B. Lamm, representing: Gate Watchmen, Office Workers, Laboratory and Telephone Operators, Filling Racks, Timekeepers, Teamsters, Weighmaster, Restaurant, Storehouse and First Aid, Janitors, Car Inspectors, Yard Clerk, Balloon House, Continuous Treating.

Division No. 6—J. F. Shank, Representing: Fire Department.

Division No. 7—George Wollenweber, Representing: Carpenter Department, Machine Shop, Electric Shop, Salvage Department, Brass Foundry.

Division No. 8—Washington McDonald, Representing: Gaugers, Paraffin Works, Carbinol Works, Acid Works, Lubricating Works, Auto Drivers and Helpers, Tin Shop, Paint Shop and Pipe Coverers.

Division No. 9—A. McGuiggan, Representing: Common Labor, Welders and Lead Burners, Blacksmith Shop.

PHILLMOOR NOW PHILMACK CO.

OKLAHOMA CITY. June 5.—The Phillmoor company of Tulsa, one of the incorporators of which was Waite Phillips, admended its charter recently and changed the name to the Philmack company. The capital stock is $2,000,000 and the incorporators are Phillips, R. Otis McClintock and Gillette Hill, all of Tulsa.

Are made for the Oil Industry

TRANSIT PUMPS

Reciprocating steam and power pumps for general service, boiler feeding, pipe line and oil country service.

NATIONAL TRANSIT PUMP & MACHINE CO.
Oil City, Pa.

District Offices: New York, Philadelphia, Pittsburgh, Tulsa, Cleveland, Houston and Denver.

"The Hoist Unit with the 21 Plus Points of Superiority"

Why use any other with fewer advantages?
This one costs no more—note these features:

1—Timken Tapered Bearings in trolley wheels.
2—Steel side plates in trolley.
3—Steel equalizing pin in trolley.
4—Chilled tread wheels in trolley.
5—Steel hanger plates in trolley.
6—Steel hook, drop forged, proof-tested.
7—Steel drop-forged cross guard in hoist.
8—Safety load chain guard.
9—Steel load wheel.
10—Oil tubes.
11—Main driving spindle pinion of SAE Steel.
12—Bronze bushed load sheave.
13—Ball bearing driving spindle.
14—Steel suspension plates.
15—Non-fouling hand chain guide.
16—Gear cover, extra heavy.
17—Steel chain, electric welded.
18—Steel hook, can't open to drop load.
19—Detachable steel coupling.
20—Ball thrust bearing on bottom swivel hook.
21—Spring cover in oil holes.

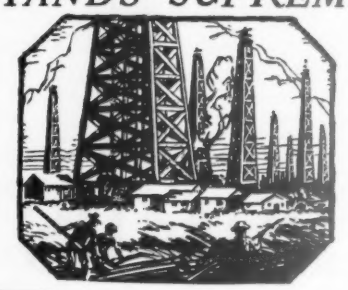
WRIGHT MANUFACTURING COMPANY LISBON, OHIO.

IMPROVED HIGH SPEED HOIST

Manufactured and sold in Canada by
RILEY ENGINEERING & SUPPLY COMPANY, LTD.,
360 Dufferin St., Toronto 3, Canada

37B

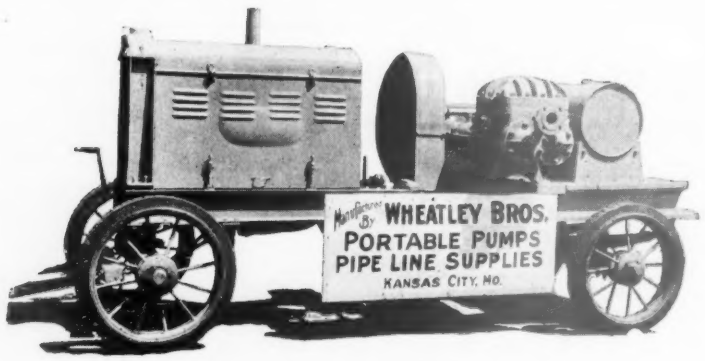
ASCO STEEL
STANDS SUPREME



Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICE:
502 Cosden Bldg., Tulsa, Okla.

THE ANDREWS STEEL CO.
NEWPORT ASCO KENTUCKY



WHEATLEY PORTABLE PUMPING UNITS

have proven successful through actual service over a period of 2½ years.

One pipe line company alone operates 65 Wheatley units.

Write for further information.

WHEATLEY BROS.

1906 Wyandotte St., KANSAS CITY, MO.

24 No. Owasso St. TULSA, OKLA.

APRIL'S PRODUCTION RECORD IN FIVE MIDLAND STATES SHOWS INCREASE

The States of Kansas, Oklahoma, Texas, Arkansas and Louisiana, in which lie the Mid-Continent, the Gulf Coast Field and the southwest Texas producing divisions, the production in April averaged 1,188,805 bbls. while in March the total was 1,149,287 bbls. (revised figures) showing a gain in April of 39,518 bbls. a day.

An increase of 3.427 bbls. a day in Kansas, which produced an average of 111,004 bbls. a day in April; an increase of 20,567 bbls. in Oklahoma, which yielded an average of 482,273 bbls.; an increase of 9,816 bbls. in the north central Texas area where the production in April was 238,769 bbls. a day; a gain of 3,137 bbls. a day in north Louisiana, which produced in April 51,886 bbls. a day, and a gain of 4,890 bbls. in Arkansas, where the April output was 170,917 bbls., far more than offset the decrease of 3,158 bbls. in the Gulf Coast Field and of 161 bbls. in the southwest Texas fields, where the production, respectively, was 94,735 bbls. and 39,221 bbls. a day in April.

In Oklahoma where the largest increase in production is noted, the deep sand in the Wewoka Field was an important factor, the production in that pool having increased from 17,410 bbls. in March to 36,827 bbls. as an average for April, while the Garber Field increased from 29,682 bbls. a day in March to 37,258 bbls. in April. These were the greatest gains made in the state.

In the north Texas area the Hutchinson County Field in the Panhandle increased from 5,346 bbls. in March to 10,369 bbls. a day as April's average.

Following are the records of production by pool in the five states:

SUMMARY BY PRODUCING DIVISIONS

Mid-Continent Fields

	Daily Av. Bbls.	Month Bbls.
Kansas	111,004	3,330,120
Oklahoma	482,273	14,468,190
North Texas	91,372	2,741,160
Central Texas	39,719	1,191,570
West Texas	36,450	1,093,500
Panhandle Texas	13,129	393,870
East Central Texas	58,099	1,742,970
Arkansas	170,917	5,127,510
North Louisiana	51,886	1,556,580
Total April	1,054,849	31,645,470
Total March*	1,012,012	31,372,372
Difference	42,837	273,098

*Revised.

Gulf Coast and Southwest Texas

Gulf Coast (Tex.-La.)	94,735	2,842,050
Southwest Texas	39,221	1,176,630
Total April	133,956	4,018,680
Total March	137,275	4,255,525
Difference	3,319	136,845

PRODUCTION BY STATES

	Daily Av. Bbls.	Month Bbls.
Kansas	111,004	3,330,120
Oklahoma	482,273	14,468,190
Texas	359,292	10,778,760
Arkansas	170,917	5,127,510
Louisiana	65,319	1,959,570
Total April	1,188,805	35,664,150
Total March	1,149,287	35,627,897
Difference	39,518	36,253

KANSAS

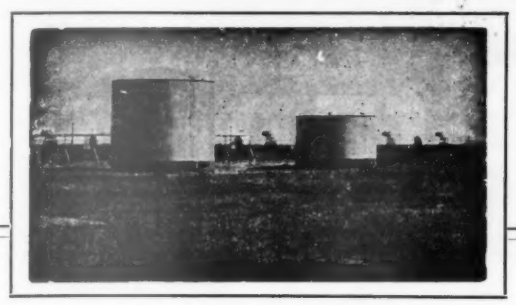
Daily Average and Total Monthly Production in April, 1926

	Daily Av.	Month
Marion County:		
Florence	1,014	30,420
Peabody	1,915	57,450
Covert-Sellers	773	23,190
Total	3,702	111,060
Butler County:		
Elbing	2,855	85,650
Potwin	399	11,970
Cameron-Robinson	577	17,310
Wilson-Dunkle	1,889	56,670
Towanda	2,732	81,960
Fox Bush	1,833	54,990
Nuttual-Koogler	1,970	59,100
El Dorado	6,387	191,610
Smock	294	8,820
Leon-Weaver	760	22,800
North Augusta	1,368	41,040
South Augusta	1,951	58,530
Sluss	406	12,180
Douglass	134	4,020
Eastern Butler	5,176	155,280
Total	28,731	861,930
Greenwood-Woodson Counties:		
Sallyards	1,842	55,260
Teeter-Pixley-Scott	19,984	599,520
Virgil	4,648	139,440
Thrall-Burkett	4,236	127,080
Seely	13,175	395,250
Polhamus	2,225	66,750
Miscellaneous	935	28,050
Total	47,045	1,411,350
Cowley County:		
Rainbow Bend	4,475	134,250
Slick	1,620	48,600
Graham	1,345	40,350
Rock (Twp. 30-4)	373	11,190
Clark (Twp. 31-5)	305	9,150
Eastman (Twps. 30-6 and 31-6)	903	27,090
Winfield-New Salem (Twps. 32-4 and 32-5)	1,917	57,510
Miscellaneous	452	13,560
Total	11,390	341,700
Other Counties:		
Sumner	338	10,140
Rice	184	5,520
Russell	5,555	166,650
Harvey	49	1,470
Chautauqua	2,463	73,890
Elk	1,578	47,340
Wilson	258	7,740
Montgomery	1,943	58,290
Allen	802	24,060
Neosho	662	19,860
Lyon	1,670	50,100
Miami	459	13,770
Franklin	529	15,870
Douglass	44	1,320
Bourbon	19	570
Linn	242	7,260
Anderson	3,314	99,420
Labette	27	810
Total	20,136	604,080
Total April	111,004	3,330,120
Total March	107,577	3,334,887
Difference	3,427	4,767

OKLAHOMA

Daily Average and Total Monthly Production in April, 1926

	Daily Av.	Month
Washington County	5,915	177,450
Nowata County	4,835	145,050
Rogers County	1,498	44,940
Osage and Eastern Kay Counties:		
Burbank	42,470	1,274,100
Osage, outside Burbank	32,389	971,670
Total	74,859	2,245,770
Tulsa County:		
Bird Creek, Owasso, etc.	3,942	118,260
Red Fork, Sand Springs, Bruner, Turkey Mountain and Fisher	4,182	125,460
Bixby, Leonard and Jenks	3,080	92,400
Broken Arrow and Coweta	1,152	34,560
Total	12,356	370,680
Okmulgee, Muskogee and McIntosh Counties:		
Mounds, Beggs, Hamilton Switch, Youngstown	10,977	329,310
Bald Hill and Haskell	2,883	86,490
Morris, Boynton and Cole	2,911	87,330
Okmulgee	2,102	63,060
Tiger Flats, Henryetta, Schulter and Bartlett	5,388	161,640
Total	24,261	727,830
Okfuskee, Seminole and Hughes Counties:		
Deaner-Lyons	4,171	125,130
Wewoka	36,827	1,104,810
Cromwell	18,413	552,390
Papoose-Gilcrease	12,252	367,560
Okemah	163	4,890
Weleetka	1,430	42,900
Wetumka	45	1,350
Yeager	775	23,250
Miscellaneous	1,529	45,870
Total	75,605	2,268,150
Creek County:		
Cushing-Shamrock	20,585	617,550
Mannford-Olive	799	23,970
Glenn Pool, Sapulpa and Kiefer	8,744	262,320
Bristow, Kellyville and Depew	23,541	706,230
North Bristow (Twp. 17-8)	4,134	124,020
East Bristow or Slick	5,962	178,860
Total	63,765	1,912,950
Pawnee County:		
Cleveland	4,256	127,680
Keystone	1,356	40,680
Jennings	5,654	169,620
Otoe or Watchorn	2,776	83,280
Masham	151	4,530
Ralston	172	5,160
Total	14,365	430,950
Yale, Quay and Ingalls	10,820	324,600
North Cushing or Marsh Pool	1,424	42,720
Deep Rock (23-18-3)	4,670	140,100
Total	16,914	507,420
Lincoln County:		
Stroud	2,404	72,120
Davenport	17,082	512,460
Kendrick	1,970	59,100
Total	21,456	643,680
Kay, Grant and Noble Counties:		
Blackwell	1,691	50,730
Northwest Blackwell	2,162	64,860
Deer Creek	83	2,490
Ponca City	809	24,270
Mervine	320	9,600
North Braman	2,426	72,780
South Braman	10,356	310,680
Hubbard	1,863	55,890
Thomas	5,487	164,610
Tonkawa	37,699	1,130,970
Billings	387	11,610
Miscellaneous	291	8,730
Total	63,574	1,907,220
Garfield County:		
Garber	37,258	1,117,740
Carter County:		
Healdton	14,920	447,600
Hewitt	12,047	361,410
Graham	9,599	287,970



Stop Evaporating Losses Now!

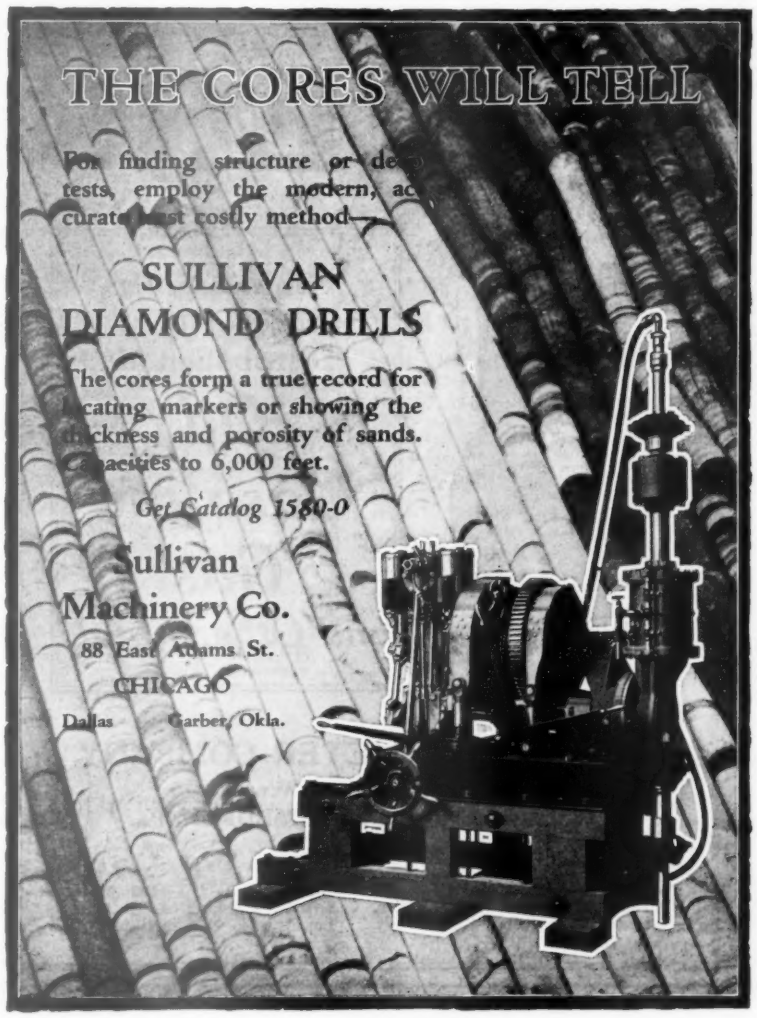
"United" all-steel tanks are made especially for oil conservation and soon pay for themselves. They are heavy plate, tight-riveted, tight-caulked **and guaranteed gas-tight.**

We can re-roof your present tankage with gas-tight roofs. New roofs add years of service.

We will gladly furnish estimates according to your specifications without obligation.

UNITED IRON WORKS, Inc.

DALLAS KANSAS CITY, MO. TULSA



Fox	2,688	80,640
Brock	1,638	49,140
Tussy or Scholem Alechem	2,312	69,360
Total	43,204	1,296,120
Stephens-Cotton Counties:		
Loco-Milroy	2,379	71,370
Comanche	915	27,450
Duncan	6,020	180,600
Walters	964	28,920
Kilgore	1,688	50,640
Knox (2-2n-5w)	1,290	38,700
Total	13,256	397,680
Jefferson County:		
Lloyd	88	2,640
Hambro	4,123	123,690
Frances	35	1,050
Total	4,246	127,380
Caddo County:		
Cement	1,688	50,640
Garvin County:		
Robberson	2,728	81,840
Beckham County:		
Sayre	102	3,060
Pontotoc County:		
Allen	271	8,130
Pottawatomie County:		
Maud	27	810
Marshall County:		
Madill	90	2,700
Total April	482,273	14,468,190
Total March	461,706	14,312,886
Difference	20,567	155,204

NORTH AND CENTRAL TEXAS

Daily Average and Total Monthly Production in April, 1926

North Central Texas:	Daily Av.	Month
Burkburnett	12,281	368,430
Electra	16,679	500,370
Iowa Park, K. M. A.	4,282	128,460
Archer County	35,012	1,050,360
Clay County	508	15,240
South Vernon	13,516	405,480
Montague County	2,502	75,060
Young County	6,417	192,510
Baylor County	175	5,250
Total	91,372	2,741,160
Central Texas:		
Clear Fork	6,060	181,800
Breckenridge	5,955	178,650
Caddo	3,487	104,610
Ranger-Eastland	5,061	151,830
Rising Star	101	3,030
Sipe Springs	137	4,110
Desdemona	1,852	55,560
Pioneer	596	17,880
Brown County	6,576	197,280
Calahan County	3,586	107,580
Coleman County	997	29,910
Throckmorton County	523	15,690
Jack County	90	2,700
Palo Pinto County	496	14,880
Shackelford	4,202	126,060
Crane County	259	7,770
Reagan County (Big Lake)	32,487	974,610
Mitchell County	3,365	100,950
Howard County	47	1,410
Scurry County	36	1,080
Upton County	256	7,680
Total	76,169	2,285,070
Panhandle:		
Carson County	2,171	65,130
Hutchinson County	10,369	311,070
Wheeler	108	3,240
Gray	481	14,430
Total	13,129	393,870
East Central Texas:		
Powell	30,799	923,970
Mexia	15,791	473,730
Currie	980	29,400
Richland	1,481	44,430
Wortham	9,048	271,440
Total	58,099	1,742,970
Total all fields April	238,769	7,163,070
Total all fields March	228,953	7,097,543
Difference	9,816	65,527

NORTH LOUISIANA

Daily Average and Monthly Production in April, 1926

	Daily Av.	Month
Bellevue	2,322	69,660
Caddo light	8,676	257,280
Caddo heavy	2,200	66,000
Cotton Valley	8,588	257,640
DeSoto and Red River	3,782	113,460
Elm Grove	686	20,580
Haynesville	10,198	305,940
Homer	5,691	170,730
Urania	9,843	295,290
Total April	51,886	1,556,580
Total March	48,749	1,511,118
Difference	3,137	45,462

ARKANSAS

Daily Average and Monthly Production in April, 1926

	Daily Av.	Month
Smackover heavy	134,084	4,022,520
Smackover light	17,310	519,300
El Dorado	7,376	221,280
Lisbon	7,444	223,320
Nevada	3,004	90,120
Stephens	1,699	50,970
Total April	170,917	5,127,510
Total March	165,027	5,131,937
Difference	5,890	4,427

GULF COAST

Daily Average and Monthly Production in April,, 1926

District—	Daily Av.	Gross Bbls.
Boling	5,438	163,140
Batson	1,137	34,110
Blue Ridge	698	20,940
Barber Hill	115	3,450
Big Creek	1,010	30,300
Damon Mound	855	25,650
Dayton	72	2,160
Edgerly (La.)	786	23,580
Goose Creek	9,132	273,960
Humble	4,494	134,820
Hull	20,750	622,500
High Island	80	2,400
Jennings (La.)	1,204	36,120

TRIMO

—tools that buyer and worker agree on

For nearly 40 years TRIMO TOOLS have held their place of leadership in the oil industry. Executives who have to foot the bills, and mechanics who have to do the work, agree that the following features put TRIMO TOOLS in a class by themselves.

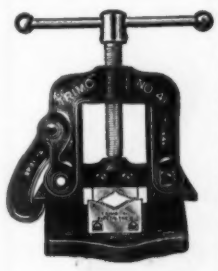
Trimo Pipe Wrench

Jaws and handle are drop-forged. Unbreakable pressed steel frame. Grips powerfully but releases readily. Nut guards prevent loss of adjustment when working in close quarters. Insert jaw in handle and all parts interchangeable. Made with steel and wood handles.

Trimo Pipe Cutter

Can be used with one cutting wheel and 2 rolls or 3 cutting wheels. Two tools in one drop-forged frame. No thread in frame or roll block to wear out. The new TRIMO Thin Wheel makes a quicker, cleaner cut, with less burr.

Trimo Pipe Vise



Jaws are made of tempered tool steel and have fine-milled teeth which grip the pipe firmly. Yoke, frame and base are of guaranteed malleable iron. Screw, head and handle are of selected steel. Seven standard sizes.

Sold by all oil well and mill supply houses. Demand TRIMO TOOLS—accept no other.

Trimont Mfg. Co.

Roxbury, Mass.

Simplex Emergency Jack No. 310

No. 310—Capacity 15 tons
Single acting—automatic lowering

No. 310 is known as the Jack of a hundred uses. A standby in every oil field. Operates at any angle or vertically.

Built with drop forged steel working parts and furnished with five foot steel chain—steel auxiliary claw and steel level bar.

Unsurpassed for extricating stalled motor trucks—jacking steam engines—raising and setting boilers, raising sand reels and casing sills, skidding rigs and moving tanks and heavy machinery.

Templeton, Kenly & Co., Ltd.
Established 1899
Sole Manufacturers of the Simplex Jacks
Chicago, Ill., U.S.A.

Simplex Jacks are extensively imitated but they never have been equaled in manpower, simplicity, stability or safety.

Simplex Jacks are sold by the supply houses that are leaders in every oil field.

Lockport (La.)	4,753	142,590
Markham	75	2,250
Nash	198	5,940
Orange	11,552	346,560
Orchard	130	3,900
Pierce Junction	1,745	52,350
Piedras Pintas	241	7,230
Spindletop	2,839	85,170
Saratoga	1,314	39,420
Sour Lake	4,357	130,710
South Liberty	5,545	166,350
Vinton (La.)	6,610	198,300
West Columbia	9,405	282,150
Welsh-Anse La Bute (La.)	80	2,400
*Miscellaneous	120	3,600
Total April	94,735	2,842,050
Total March	97,893	3,034,683
Difference	3,158	192,633

*Includes Nacogdoches, Washington County, Klerberg County and scattered.

SOUTHWEST TEXAS

Daily Average and Monthly Production in April, 1926

Field—	Daily Av.	Month
Luling	22,710	681,300
Mirando*	6,598	197,940
Somerset	2,230	66,900
Calliham	121	3,630
Rockdale-Minerva	926	27,780
Lockhart	6,636	199,080
Total April	39,221	1,176,630
Total March	39,382	1,220,842
Difference	161	44,212

*Includes Webb, Jim Hogg and Zapata Counties.

Growth of Aviation For Commercial Use By Big Business

By L. M. Fanning
New York Bureau, The Oil and Gas Journal, 30 Church St., New York

The conquest of the North Pole by airplane and dirigible again focuses attention on the forward strides of aviation. Apart from the fact that gasoline and oil played an important part in the polar flights of Commander Richard E. Byrd and of the Amundsen-Ellsworth-Nobile airship, the Norge, is the growing market for aviation gasoline and aviation engine lubricants in every-day activity due to the growth of the commercial flying which has spread all over the United States. While this country has been trailing some foreign countries, notably Great Britain and France, America is now moving to the front in aviation.

The Byrd expedition to the North Pole is generally recognized as being one of the most carefully planned and completely equipped essays into the Arctic ever attempted. The matter of gas power and lubrication for the engines of the two planes taken North was considered highly important. The Fokker plane, the Josephine Ford, which accomplished the North Pole flight, is equipped with three Wright Whirlwind engines of 200 horsepower each. The plane has a wing spread of 62 feet and a total overall weight of 10,000 pounds. It is credited with a cruising radius of 1,400 miles, its maximum speed being in excess of 120 miles an hour and its average cruising radius 100 miles an hour.

Oil For Polar Flight

The gasoline for the Byrd expedition was furnished by the Standard Oil Co. of New Jersey. When the steamship Chantier, carrying the members and equipment of the Byrd party, left New York early in April it took along 85 steel barrels and 300 five-gallon tins of aviation fighting gasoline.

The Vacuum Oil Co. supplied the lubricants for the expedition, and third in command, after Commander Byrd and Floyd O. Bennett, who actually made the polar flight, was Lieut. George O. Noville, U.S.N.R.F., of the Vacuum Oil Co., upon whom rested the responsibility for the lubrication and fuel factors of the flight. Lieutenant Noville distinguished himself in the World War and rendered important service in connection with the Round the World Flight.

Regarding the growth of aviation in this country, aeronautical authorities state that America is now using more airplanes for civil purposes than any other country in the world.

For a long period the United States lagged in aviation, but now it is moving rapidly to the fore. American pilots in American machines this summer will be flying nearly 17,000 miles a day on sched-

Approved for Field and Refinery Service

Stanley

Solid Woven Cotton Belting

What to Order

POWERS: Order STANLEY "Double."

PUMPING: Order STANLEY "Double." On very deep or very heavy wells order "Triple."

DRILLING: Order STANLEY "Double." Deeper than 3,000 feet order "Triple." Less than 3,000 feet a "Triple" will more than pay for itself in extra length of service.

COMPRESSORS: Order STANLEY "Double" except on small pulleys where single is best.

VACUUM PLANTS: Order STANLEY "Double."

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Automatic Lubricator and Steam Separator

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Richfield Oil Co., Signal Hill, Calif.

CUT YOUR DRILLING COST

Ask the field superintendent of any big oil producer or driller in California his opinion of this equipment and he'll tell you he wouldn't think of drilling without it.

A list of users reads like a roster of the oil industry. It is standard with Associated, General Petroleum, Henderson, Marine, Pacific Oil, Richfield, San Martinez, Shell, Standard, Union and many others. One has 30. Another has bought 11 more in the past 5 weeks.

Why? Because it delivers dry steam to any length steam line, eliminating water slam, broken eccentrics and valve motions caused by wet steam and condensation. It reduces expense and delay of shutdowns for repairs necessitated by wet steam and consequently speeds up drilling.

It not only saves time and money in this respect but it reduces your lubricating oil bill 50 per cent or more.

It drills more hole in less time at less expense. It more than saves its cost on one well, costs nothing for maintenance and apparently never wears out. It is indispensable for speed and economy—especially where condensation is heavy.

ASK ANY USER

VOLZ ENGINEERING EQUIPMENT CO.

Main Office
502 E. 3rd St., Los Angeles, Calif., U. S. A.

MID-CONTINENT OFFICE
S. O. Hale, Manager
2719 Houston Ave., Houston, Texas

ule, and the air mail routes in the country have reached a total of 8,392 miles.

Within the past few years 10 new airplane lines, privately owned, have been established. Some are already in operation and others will be flying on daily schedule within a few weeks. The routes take in 50 important cities and all have contracts to carry the mails.

Thus there have been added 4,881 miles of air mail routes to the older aerial highways, the lines operated by the Post Office Department—2,757 miles of daylight route between New York and San Francisco and 754 miles of night flying airway between New York and Chicago.

First Commercial Year

Among transportation men, the present year is already spoken of as opening the first commercial period of the aerial age, for efforts, heretofore futile, to make a paying business of flying seem about to be realized, and the aviation industry begins to be organized on a sound financial basis.

While the planes seen in the air in former years were mostly machines operated by the Government military services, many of the craft flying today are strictly commercial types, cargo planes, large and small, differing from the war types and designed for economy of operation rather than for speed.

The fact that big business and transportation men are now supporting the industry without direct subsidies from the Federal Government indicates how well this country is advancing in aviation. All other governments subsidize their civilian industry and air transport lines by means of tax levies. Because American aviation is getting under way on its own power as a business venture, without cost to the taxpayers, the transportation experts see great promise for the future.

It is estimated that close to a million letters are sent by air every day. Post office contract routes are being constantly increased, private companies operating the routes and carrying the mails under Government contract. The Ford Motor Co. operates two contract routes.

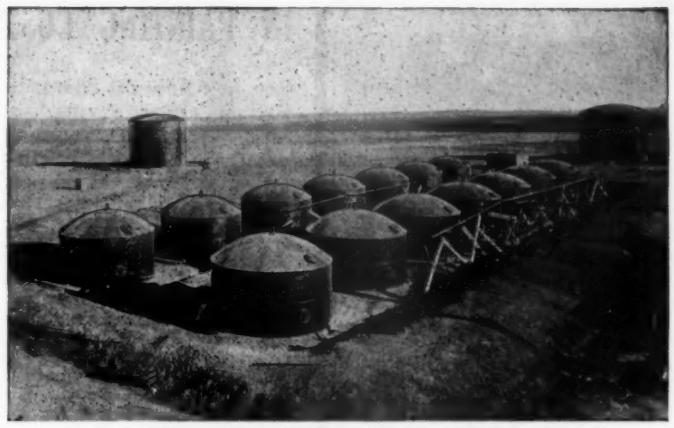
The fact that contract routes have just recently begun operations does not mean that they are the first to undertake commercial aviation. About 400 airplane operators in this country have been doing pioneering work on a small scale for a number of years. Last year these pilots flew a total of 7,000,000 miles. Some of them are known as gypsy pilots, others as fixed base operators. Most of them have done business on a small scale. Much of the present knowledge concerning commercial flying is credited to them, however.

Government Help Needed

At this stage of the development of aviation, the matter of landing fields and lighted air routes is highly important. The industry has not developed to the stage where it can finance these facilities. Operators cannot afford to buy land, erect hangars and shops and finance the development of equipment and growth of the new business at the same time. They are depending largely on municipalities for local facilities, and these are being supplied. The first logical field of aviation is the transport of the mails. The second is the carrying of express in large quantities, and the third the carrying of passengers on schedules similar to those of the railroads. At present the cost is prohibitive for extensive express or passenger carrying. These costs are determined by the maintenance and depreciation charges, the carrying capacity of the planes and the volume of business.

One problem is to reduce the cost of operation so that express can be carried at lower rates. Another is to perfect passenger planes so that people can be flown economically, on schedule and in safety. That, it is stated, will require multi-engined planes that can remain in the air even if one or two engines fail. Navigation instruments that will keep a machine on its course in a fog or storm are also required—a light radio direction finder, for example. Ground facilities for night flying will be necessary.

Experts who are studying the question assert these facilities cannot be estab-



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Any Size from 500 gallons to 80,000 barrels.

Erected Anywhere by our own field crews.

Promptly because we carry a large stock of tanks on hand at both our Des Moines and Pittsburgh shops, completely fabricated and ready for immediate shipment.

Send to our nearest office for designs and estimates of the tanks you need. Or, if you wish, ask an engineer to call and discuss your plans with you.

Write for our Oil Tank Catalog No. 11.

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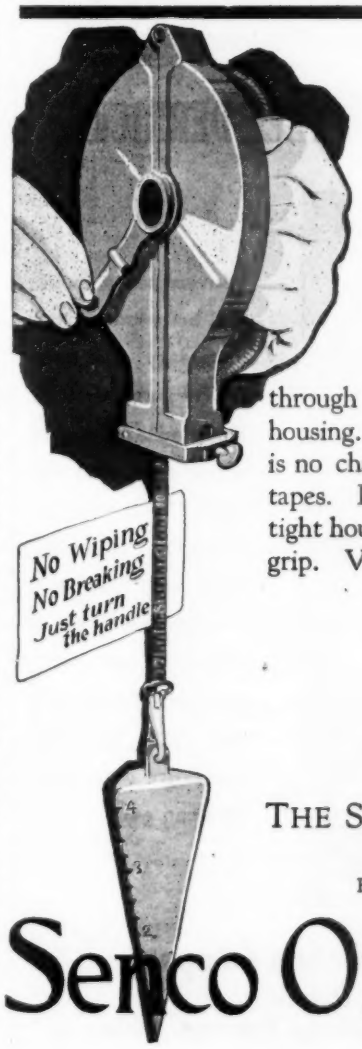


SENCO OIL GAUGER

A Money Saver and a Time Saver

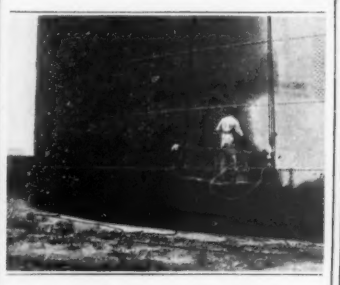
It is designed to replace the old-fashioned method of gauging tanks. The tape passes through metal wipers at the bottom of the housing. This saves hand wiping and there is no chance of twisting and breaking the tapes. It is enclosed in an aluminum watertight housing and has a man-sized handle and grip. Very convenient, light and durable.

$18.75

The saving in time and breakage makes it worth many times this figure.

THE STATES ENGINEERING CO.
600 E. LOMBARD STREET
BALTIMORE - MARYLAND

Senco Oil Gauger



OUTSTANDING FEATURES OF THE MATTHEWS GUN

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2. Only one nozzle and one sleeve for all materials.
3. Spot the size of a dime to 12-inch stroke.
4. Easy to clean without taking apart.
5. Fewer parts. No needle valve.
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SAVE 40% TO 70% IN PAINTING COSTS

See just how oil companies everywhere are saving thousands of dollars annually on their cost of painting bulk stations, tank cars, cracking units, refineries, buildings, and all company properties. Matthews Mechanical Painting Equipment now enables one man to do the work of four to eight hand painters. Where oil companies have been spending 65% of their maintenance painting money for labor and 35% for material, they tell us that now, using Matthews Mechanical Painting Equipment, the proportion is but 25% for labor and 75% for material. Hence with a given appropriation Matthews Mechanical Painting Equipment will enable you to paint from 2 to 3 times more surface. The exclusive features of the Matthews Paint Gun eliminate waste and remove the objectionable features of ordinary spray painting methods. See just why maintenance men, after critical tests, discard other methods and equipment and choose

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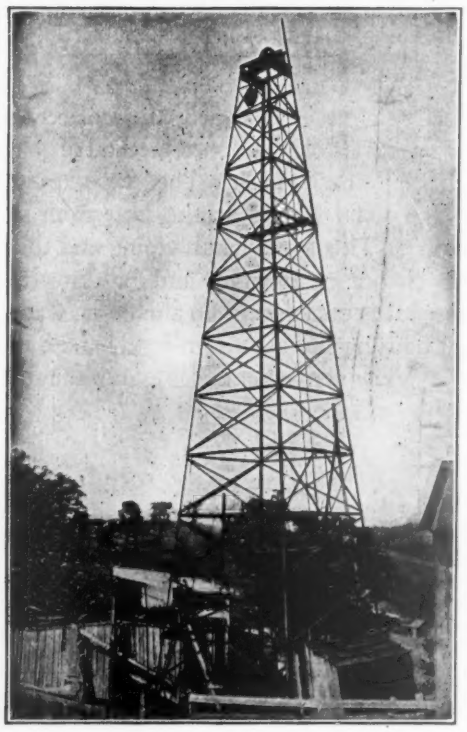
O'BRIEN STRUCTURAL STEEL DERRICKS



Eleven years in use and no repair parts necessary on any O'Brien derricks. They will drill your wells and pull the pipe. Will not deteriorate, your salvage will be 100% twenty-five years hence. Your wells are your bank, why not put the best structure over them you can get.

O'Brien Steel Construction Company
Washington, Penna.
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lished privately. They must be set up by the Government. Aerial beacons, radio intelligence, adequate weather reports, regulations for the traffic and a system of inspection of machines and examination of pilots, are recommended. The Bigham bill now in Congress will do much of this if it becomes a law.

Program For Session On Standardization at Colorado Springs

Following is the program for the Second Semiannual Conference of the Special A. P. I. Committees on the Standardization of Oil Field Equipment, to be held in the Broadmoor Hotel, Colorado Springs, Colo., June 15-16-17, 1926. All persons interested in standardization are invited to attend.

JUNE 15

10 a. m., auditorium, main floor, Broadmoor Hotel: Group session of all committees.

Immediately after the opening address, each standardization committee will adjourn to the conference room assigned to it, on the first floor of the north lake section of the Broadmoor Hotel, as listed below. Detailed programs for each committee will be mailed to the respective members by the national chairman.

Room No. 108—Belting, Committee No. 1, A. H. Riney, national chairman.

Review of Tentative Specifications.

Report of Research on Physical Properties.

Conference with Representatives of Rubber Association of America.

Utilization of Specifications.

Room No. 109—Oil Field Boilers, Committee No. 2, A. B. Steen, national chairman.

Review of Proof Copies of Final Specifications.

Utilization of Specifications.

Room No. 110—Cable Drilling Tool Joints, Committee No. 3, Thomas Fleming, Jr., national chairman.

Report on Master Gages.

Completion of Gage Tables and Testing Instructions.

Amendment of Specifications to Include Gage Tables.

Design of Center Gage and Taper Testing Mandrel.

Code for Care of Joints in Field.

Room No. 104—Standard Rigs and Derricks, Committee No. 4, W. W. Fondren, national chairman.

Derrick Heights, Bases and Standard Taper for Legs.

Classification of Derricks as to Strengh.

Foundation Bolts and Foundation Bolt Centers.

Making A. P. I. Derricks.

Room No. 105—Oil Country Tubular Goods, Committee No. 5, J. Edgar Pew, national chairman.

Gaging Methods for Casing.

Scarfing.

Marking Rephosphorized Pipe.

Utilization of Casing Specifications.

Line Pipe Recommendations.

Review of Drill Pipe and Tubing Standards in Proof Form.

Room No. 103—Rig Irons, Committee No. 6, H. J. Lockhart, national chairman.

Discussion of Sizes and Tolerances, Keys and Keyways.

Review of Revised Edition of Rig Iron Specification.

Marketing A. P. I. Rig Irons.

Room No. 106—Rotary Drilling Equipment, Committee No. 7, Capt. J. F. Lucey, national chairman.

Review of Proof Copies Transmission Standards.

Review of Proof Copies Miscellaneous Standards.

Review of Taper Joint Specification.

Additional Tests on A. P. I. Acme Type Tool Joint Thread.

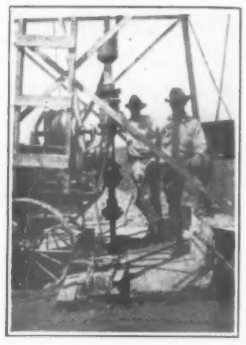
Organization of Gage Committee for Taper Joint Gages.

Review of Proof Copies Drill Pipe Standards.

Room No. 112—Wire Lines and Manila Cordage, Committee No. 9, C. C. Scharpenberg, national chairman.

Review of Tentative Specifications.

Get the Core—



The Core Drill's Far-Flung Line

Our oil producing areas have been so thoroughly explored by subsurface methods that practically all semi-proven regions have been mapped, leased and developed. These areas are being drained of oil rapidly, our more than 200,000 oil wells producing today an average of only seven barrels of oil daily.

More and more the country must look to its great untested areas for its supply of petroleum—the prairies of our western states, where for miles and miles there may be no outcroppings, where blankets of sand and river wash completely obscure surface indications.

For any company, however strong financially, to seek to develop these unknown lands from the data as ordinarily provided by surface geology would be to involve an amount of capital waste out of proportion to any benefit to be obtained.

Fortunately, the means is at hand to provide accurate, reliable data for those who decide to seek oil in such localities. Today in Oklahoma, Kansas and Texas, in Colorado and Wyoming, in Mexico and Canada, the whir of the core drill can be heard. It is being used to test structure, to locate and develop new production. By no method other than

Core Drilling

can the vital facts be obtained in such areas before development begins. The facts lie beneath the surface, beyond the power of the eye to see. Only the core drill can obtain them.

We shall be glad to tell you what the core drill can do in such unusual circumstances, and in the everyday problems which confront the producer.

Mineral Exploration Company

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Denver, Colorado

Atlas Life Building
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And Know All!

Right Now Is the Best Time To Do It

The Oil Industry has a favorable outlook. It has a good background for real expansion.

Good weather is approaching rapidly. Millions of gallons of gasoline and oil will be consumed.

Right now is the best time to deal in Oil Leases, Production, Royalties and used equipment of all kinds.

The Classified Section of The Oil and Gas Journal is the best means to use to reach those who are genuinely interested in a product or service such as yours.

25,000 oil men (Producers, Refiners, Natural Gasoline Manufacturers, Pipe Liners) read The Oil and Gas Journal every week.

Let them know about your Lease, Royalty, Production or Used Equipment. Advertise in the Classified Section.

It doesn't cost much; 35 cents a line for the first insertion of an advertisement and 25 cents for each additional insertion. Six words usually make a line.

Let the readers of next week's issue see your advertisement. Mail it at once. You'll get results.

The Oil and Gas Journal
TULSA, OKLA.

Report from Research Committee.
Utilization of Specifications.
Room No. 107—Pumping Equipment and Engines, Committee No. 11, W. L. McLaine, national chairman.
Review of Proof Copies Tubing Standards.
Review of Proof Copies Working Barrel Standards.
Report on Sucker Rod Threads.
Report, Uniform Method of Rating, H. P. of Gas Engines.
Recommendations on Oil Well Pump Parts, Cages, Valves, Seats, etc.
Room No. 111—Tanks, Committee No. 12, G. M. Vandaveer, national chairman.
Comparison of Tentative Specifications from District Committee.s
Drafting of Specifications for Tanks, 30,000 bbls. capacity or greater.
Recommendations on Tanks under 30,000 bbls. capacity.
Room No. 102—A. P. I. Division of Standardization Headquarters, C. A. Young.
Room No. 110, 8 p .m.—Meeting of the Special A. P. I. Correlating Committee on Gages and Gaging Practice, A. B. Steen, chairman.

JUNE 16

This day will be devoted to the following:

(a) Continuation of such committee meetings from previous day as may be necessary and announced by the chairman.

(b) Joint meeting of such committees as may be necessary to properly correlate the work on items in which they have a common interest. The following joint sessions have been arranged. Other joint sessions which may be necessary will be announced by the chairman of the committees affected.

Room No. 103, 9 a. m.—Joint session of Rig Iron Committee.
Wire Line and Manila Cordage Committee and Standard Rig and Derrick Committee.
Room No. 108, 9 a. m.—Joint session of Belting Committee and Pumping Equipment Committee.
Room No. 106, 8 p. m.—Joint session of Committee of the Board of Directors on Standardization.
General Committee on Standardization.

JUNE 17

9:30 a. m.—General Standardization Symposium, main auditorium, ground floor.

Group session of all standardization committees and visitors. Each national chairman will present a brief synopsis of the progress made by his committee since the January meeting in Los Angeles after which open discussion will be invited. This group session will continue throughout the day and will conclude the standardization conference. The various subjects will be presented in the following order: Belting, boilers, cable drilling tool joints, Standard rigs and derricks, steel and iron pipe, rig irons, rotary drilling equipment, wire lines and manila cordage, pumping equipment and engines, steel storage and production tanks.

JUNE 18

Golf Tournament—There will be a golf tournament on the Broadmoor Hotel golf links for which all members of A. P. I. standardization committees and representatives of the oil trade press are eligible.

COMPLETE SABINE CANAL

The Sabine ship canal system has been extended to Lake Charles, La., and the first tankers recently brought out a cargo of oil. Work is progressing on the intercoastal canal which will connect the Mississippi River near New Orleans with Corpus Christi, Tex., by inland water.

ORGANIZED IN LOUISIANA

The Tunica Petroleum Co. has been organized under the laws of the State of Louisiana by the firm of F. S. Smithers & Co., of New York, and Palmer & Smitherman, of Shreveport, La. The new company has taken over approximately 60,000 acres of leases located in Grant, Winn and La Salle Parishes of Louisiana.

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Pipe Line Company Completes Survey of Panhandle Situation

HOUSTON, Tex., June 5.—Pipeline officials are keeping a close tab on operations in the new Panhandle district, believing the time is fast approaching when the present development and future prospects there will justify the laying of long distance lines to connect with the systems now serving the north central fields.

One of the major pipeline corporations here has made a complete survey of the situation in the Panhandle with reference to transportation. The report shows that late in May the daily average production in Carson, Gray, Hutchinson and Wheeler Counties was 38,511 bbls. from 107 producing wells. Hutchinson County led with 35,725 bbls. daily average and 74 wells. Carson County had 2,208 bbls. daily average and 24 wells. Gray County showed 478 bbls. per day from 4 wells and Wheeler County 100 bbls. from 5 wells.

The number of wells drilling totals 160 and 105 of these were below 2,000 feet. Wells rigging number 17 and the number of rigs on locations was 46. An average of 30 locations a day are being made.

Approximate shipments from the field to date are as follows: Phillips Petroleum Co. shipped 33 cars of gasoline from Panhandle City, Carson County, to Bartlesville. The Plains Pipe Line Co. sent 77,235 bbls. of crude to Texas City for the Marland Oil & Refining Co. and the Pan-Tex shipped 44,425 bbls. to the same destination for the same company. The Pan-Tex Pipe Line Co. also sent 17,035 bbls. to the Amarillo Refining Co. at Amarillo.

Stocks of crude in the field May 1 aggregated 537,264 bbls. The Plains Pipe Line Co. held 316,094 bbls. of the total, the Bartex (Phillips) 54,024 bbls., Gulf company 20,490 bbls., Skelly company 31,265 bbls., Wilcox Oil Co. 35,860 bbls. The Magnolia company had 63,919 bbls.

Steel Storage

Steel storage in the field is as follows: Carson County: Gulf Production Co., one 55,000 completed, under construction eight 80,000 bbls. American Co. one 55,000 completed. Marland Oiil Co. two 55,000 and four 10,000 bbls. completed. Plains Pipe Liine Co. five 55,000 and two 10,000 completed. Pantex Pipe Line Co. building one 10,000 and one 5,000 bbls. Skelly Oil Co. one 55,000 and The Texas Company one 55,000 bbls.

In Hutchinson County: Gulf Pipe Line Co. is building four 80,000; Marland Oil & Refining Co. is building seven 55,000 and has two 55,000 completed. Phillips Petroleum Co. has five 55,000 and will erect 22 more in Sections 5, 12 and 13, Block Y. The Skelly Oil Co. has two 55,000 and is building three more. Prairie Oil & Gas Co. has let the contract for two 55,000.

Gray County: Magnolia Petroleum Co. has three 55,000 completed and will erect 32 more. Wilcox Oil Co. has one 55,000.

Loading Racks

At present the crude is being shipped out in tank cars. The loading racks are located as follows: Marland Oil & Refining Co. has a steel double 25-car rack on spur of the main line of the Santa Fe at Panhandle City. The Plains Pipe Line Co. has a 28-car single rack on the main line spur of the Santa Fe at Panhandle City. The Phillips Petroleum Co. is enlarging to a 12-car rack for loading gasoline on the Santa Fe at Panhandle City. The Marland Oil & Refining Co. has another 40-car rack on the Fort Worth & Denver Railroad, 2 miles east of Amarillo. The Wrather Pipe Line Co. has a 3-car rack on the Rock Island Railroad at Lela. The Sinclair Oil & Gas Co. has a 10-car rack at Pampa, Gray County, on the Santa Fe and has purchased a site at Isom on the new Santa Fe spur for a 20-car rack.

Short pipelines from the field to connect with these racks are operated by the American Refining Co., Phillips Petroleum Co., Gulf, Magnolia, Pantex, Plains Pipe Line Co., Skelly, Sinclair, Wrather and the Wilcox Oil Co.

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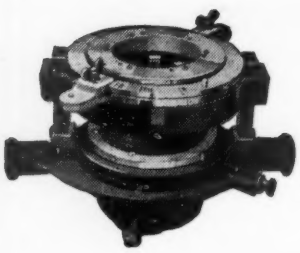

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laying an 8-inch trunk line to the Panhandle, either from Fort Worth to Amarillo or from Breckenridge to Amarillo. As is generally known, the Panhandle crude is peculiar. It is high gravity, but will not flow unless it is heated, thereby making it difficult for pipe lines to handle. The Gulf company proposes to wrap or insulate its line with a heavy material that will resist cold. Temperatures in the Panhandle section get very low during the winter months and frost penetrates the ground to a great depth.

It is proposed to heat the crude to 120 degrees or higher before turning it into the insulated pipe line. The pumping stations will be 40 to 50 miles apart and it is believed the crude will lose less degrees of heat before reaching its destination than if the line was not covered, but the stations located closer together.

Crude in California showing the same characteristics is handled through pipe lines on which the pumping stations range from 15 to 18 miles distant. The lines are not covered. Something of a similar condition exists in part of the Smackover (Ark.) Field.

Gulf company engineers have been experimenting and believe heating the Panhandle crude to above 120 degrees and pumping it through a covered or thoroughly insulated line will solve the problem. "Insulating" the line will be costly, but this is offset by less pumping stations.

If the proposed line terminates at Fort Worth the Panhandle crude will be run through the Gulf company's refinery there.

MIRANDO PIPELINE IS BEING SURVEYED

HOUSTON, Tex., June 5.—The Magnolia Pipe Line Co. nas started making a preliminary survey for an extension of its 8-inch welded line from Luling southwestward to the Mirando districts in Webb, Jim Hogg, Zapata and Duval Counties. The distance is approximately 180 miles. The present line extends from Luling to the Magnolia company's refinery at Beaumont, which is about the same distance, so that the line, if it is extended, will be about 360 miles long.

The Magnolia company now has eight 55,000-bbl. steel tanks filled at its Oilton tank farm, near Mirando City and is building four more. The company has recently purchased producing properties in Webb and Jim Hogg Counties in addition to the production it developed there.

The Mirando district is credited with a daily average production in excess of 8,000 bbls. and it is confidently believed this will be increased to 10,000 bbls. or more within 70 days.

The Humble Oil & Refining Co. has entered the district as a buyer of crude, competing with the Magnolia, Crown Central Petroleum Co. and the Texpata Pipe Line Co. As a result of this competition the price for the crude is now $1.25, the highest in the history of the district. The Humble Pipe Line Co. is laying gathering lines to the various pools and will ship in tank cars from Bruni on the Tex-Mex Railway for the present. That company has completed a survey for an 8-inch line to Engleside, near Corpus Christi, and will ship in tankers from there to Texas City and Baytown.

The crude is considered very good for lubricating oils.

TAR SAND OPERATIONS

CHATHAM, Ont., June 5.—Replying to a question by J. E. Armstrong, M. P. in the House of Commons, Charles Stewart, minister of mines, stated that in 1925 drilling was done by the Department of Mines in the McMurray tar sand area to obtain samples of the underlying strata containing unoxidized bituments and oils. It is planned to take samples from other localities in the same district. The drilling rig used last year was loaned by the Northern Alberta Exploration Co., the tools used being the property of the Federal Government.

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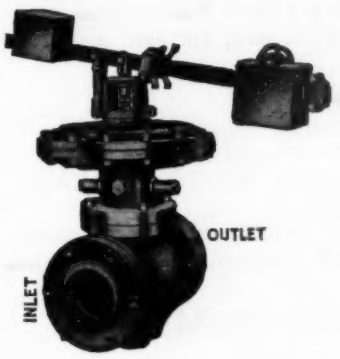

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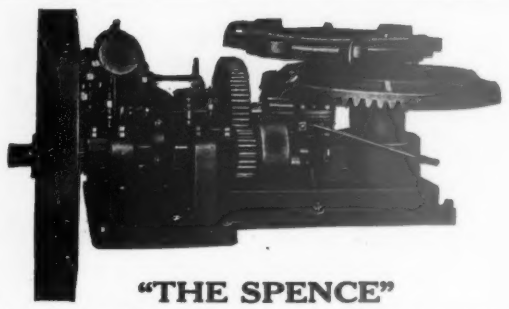

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LOUISIANA MAY GET GEOLOGICAL SURVEY

The Shreveport Geological Society and the Louisiana Engineering Society are both sponsoring and actively supporting a bill in the present legislature providing for the establishment of a state geological survey. In a statement issued by the organizations in behalf of the measure, it is said:

"Louisiana needs a scientific state organization for the investigation, description and publication of its natural resources. A state geological survey is considered an economic necessity for practically every state in the Union. Texas has its bureau of economic geology; Arkansas has its state geologist; Mississippi has its state geological survey. These surveys are provided with legislative appropriations to carry on investigation and research in the state's natural wealth for the benefit of its own citizens and for the attraction of capital and industry outside the state. They also receive federal aid in studying the state's resources.

"In 1905, Louisiana supported a small state geological survey. It has long since been discontinued because of lack of funds. The published reports of that survey formed the priceless basis for the discovery of Louisiana's present oil and gas fields. Some of those invaluable geological reports, because of the publication of them was soon exhausted, though they were originally available to citizens of the state free of charge, recently commanded fabulous prices because of their valuable information bearing on the location of oil pools.

"An illustration of the almost inestimable value to the states of the presence within its taxable jurisdiction of industries dependent for success on their geological knowledge of mineral deposits, is seen in the benefits from the severance tax on oil and gas, which has contributed in so many ways to the development and progress of the state, particularly in education and road building.

"It would be a highly commendable and economical act of the State Legislature, now in seccion at Baton Rouge, seriously to consider such a progressive means of creating and developing the taxable wealth of the State. Geological surveys have been tried out and found to be invaluable assets to almost all the states. Our legislators could not take a more certain step toward lightening the burden of taxation.

"Appropriations for state geological surveys for the fiscal year, 1925, in the states of the Gulf Coastal plain, where geological conditions are similar to those in Louisiana, were as follows: Alabama, $12,600; Arkansas, $7,500; Florida, $19,400; Georgia, $15,000; Louisiana, none; Mississippi, $20,900; Texas, $24,500.

"A few of the more distant neighbors of Louisiana made appropriations for geological work in 1925, as follows: Missouri, $59,000; Tennessee, $61,000; Illinois, $125,265; California, $201,040."

BUREAU OF MINES ON SAFETY IN DRILLING

Care must be taken when drilling oil wells in territory of high gas pressure, that the weight of the fluid in the hole is sufficient to prevent the gas and oil from blowing out of the well and perhaps igniting by friction or from some external cause, cautions the United States Bureau of Mines. Smoking and the use of naked flames on derrick floors is dangerous. Both have been the cause of many oil and gas well fires. If the electric light globes in the derrick are enclosed in gas-proof globes with metal guards around them, there is little danger that sand and small pebbles blown from the hole will break the lamp globes and allow the gas from the well to come in contact with a glowing filament. Electric and acetylene welding should not be attempted on the derrick floor when gas is present around the casing head.

Accidents caused by the flareback of boilers occur frequently. Employes should not stand directly in front of the door of boiler fireboxes when lighting or adjusting fires under boilers. The valve in

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PETROLEUM RESEARCH PLANS BEING OUTLINED

Plans to carry out research in America $9,000,000,000 petroleum industry with the $500,000 provided by John D. Rockefeller and the Universal Oil Products Co. are outlined by Dr. Benjamin T. Brooks, chairman of the New York section of the American Chemical Society, in a statement made public by the president of the society, Prof. James F. Norris of the Massachusetts Institute of Technology.

Little is known of the chemistry of these millions of barrels of liquid fuel, the mysteries of which must be penetrated by "divine curiosity," delving boldly into fundamentals, and fortified with cash, asserts Doctor Brooks.

"In hundreds of research laboratories," he says, "there are men imbued with scientific curiosity who ask only to be 'grub-staked' to go forth and blaze new trails."

Doctor Brooks, who drafted the original brief for the committee which sought the funds for research in the petroleum industry, declares that a single saving of more than $150,000,000 annually can be accomplished if fractionation by the best modern equipment is applied to the whole industry.

The refining of petroleum for the present-day products, he points out, is almost wholly a matter of engineering, rather than chemistry. Doctor Brooks indicates that the oil researchers will take up the geological history of petroleum and conduct investigations into present refinery products and processes.

DUTCH-SHELL EXTENDS VENEZUELA OPERATIONS

An issue of 24,000,000 guilders of 4½ per cent 20-year bonds of Bataafische Petroleum Co. owned 60 per cent by the Royal Dutch Petroleum Co. and 40 per cent by Shell Transport & Trading Co., will be offered at 97½. The bonds, guaranteed by Royal Dutch-Shell, constitute the second portion of an authorized issue of 72,000,000 guilders, the first portion of which, consisting of 24,000,000 guilders, was offered in January this year. The proceeds are to be applied to the extension of operations in Curacao, Venezuela and Argentina. Of the present issue 6,000,000 guilders of the bonds have already been placed.

WILL NEED GALLON TO MILE

A speed of 200 to 230 miles an hour is declared to be expected from a giant motor car now being completed at Wolverhampton, England, with a view to lowering the world's record recently claimed by Parry Thomas, English racing driver, at Pendine, Wales. The Daily Mail says it will be the largest in the world, officially rated at 1,000 horse power, and so unwieldly it will only travel at speed in a straight line. It will have two enengines, of 500 horse power each, and 12 cylinders. It is estimated it will consume roughly a gallon of gasoline per mile. The designer is a Frenchhman, Louis Goatalen.

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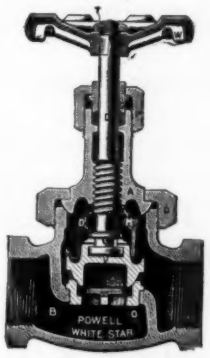

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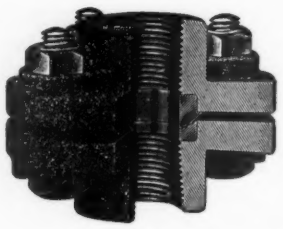
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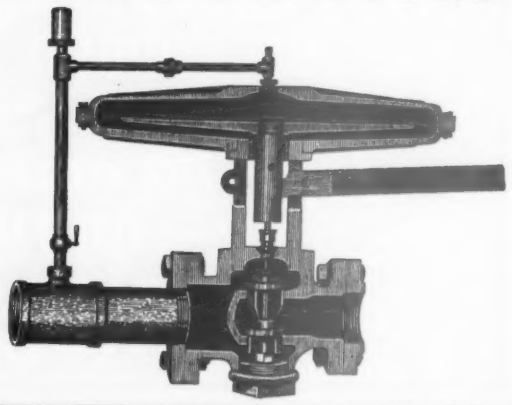
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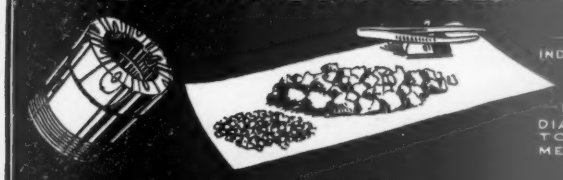
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U. S. COURT DECISION IMPORTANT TO LESSEES

Federal Judge F. E. Kennamer handed down a decision of importance to Oklahoma oil men in the case of Hallie M. Taylor, negress, against J. C. Kunkle, Jr., of Tulsa, involving an oil and gas lease covering the north half of the southwest quarter of Section 25-13-8, Okfuskee County. Judge Kennamer decided that Kunkle had complied with the provisions of the lease in tendering payment for rental to the bank designated in the lease to act as the lessor's agent.

The lease provided that failing to drill a well within the first year, or by February 24, 1924, the lessee was required to make a payment of $80 to cover another year's rental. On February 19, 1924, Kunkle mailed a registered letter containing a draft for $80 to the bank of Boley, Okla., which is a negro-owned bank in a town entirely populated by negroes. The letter instructed the bank to deposit the sum to the credit of the lessor, Hallie M. Taylor. The letter was received February 21, by H. C. McCormick, cashier of the bank, and properly receipted for. Later, when testimony was taken and the registered letter examined it was found the date had been tampered with and changed to Feburary 26, a date two days following the outside date of payment of rental.

Many oil and gas leases in Oklahoma provide for payment of rentals through a stipulated bank. This is made necessary by the fact that it is not always possible to locate the lessor to make payments—especially when the lessor desires to see the lease invalidated because of its increased value.

A lessor could remain far out of reach of a lessee or his agent if he desired to do so when the payment date approaches, and the lessee protects himself by having a bank named as agent.

OIL LESSEE'S RIGHTS IN TEXAS DECISION

AUSTIN, Tex., June 5.—A decision of importance to the oil fields was made by the Third Court of Civil Appeals in the case of United North and South Oil Co. against W. F. Mercer, from Caldwell County, which was affirmed in part, in part reversed and rendered and in part reformed.

The court held that the usual rights granted under an oil lease would preclude the lessor from going upon the land and conducting a system of ditches and a pick-up station to salvage waste or fugitive oil. The court says the lessee obtains all the rights to the land and cannot suffer interferences by the lessor; that the latter has contracted away his rights to use the land for any oil operation purposes.

After the lease was executed, Mercer constructed some ditches and erected a pick-up station to catch the waste oil and convert it to his own use. The oil company resisted with an injunction, asserting that the acts of Mercer were in conflict with the lease rights.

The trial court agreed with Mercer, but the appellate court is of a contrary opinion, holding that Mercer's station was in conflict with the lease rights, as the oil company was given the right to use all portions of the land for development. The appellate court awards the oil company full relief, including an injunction to prevent Mercer operating the pick-up station, and ordering him to remove the dam and all parts of the system.

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On June 23, 1926, at 10 a.m. at Santa Fe, New Mexico, there will be offered for sale at public auction for a cash bonus in addition to royalty on production, exploratory oil and gas mining leases covering four tracts on the Navajo and two on the Ute Mountain Indian Reservation. Twelve other tracts on the Navajo Reservation will also be offered. Full information may be obtained from R. J. Bagerman, Special Commissioner to Negotiate with the Navajo Tribe of Indians, Santa Fe, New Mexico, E. E. McKean, Superintendent Consolidated Ute Agency, Ignacio, Colorado, or the Commissioner of Indian Affairs, Washington, D. C.

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Buda Co.
Buffalo Gasolene Motor Co.
Clark Bros. Co.
Climax Engineering Co.
Franklin Valveless Engine Co.
Hercules Motor Corp.
Pattin Bros. Co.
Power Mfg. Co.
Republic Supply Co.
Titusville Iron Works Co.

Engines—Gas—
Beaver Manufacturing Co.
Bessemer Gas Engine Co.
Bruce-MacBeth Engine Co.
Buda Co.
Buffalo Gasolene Motor Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Climax Engineering Co.
Continental Supply Co.
Cooper, C. & G., Co.
Emsco Derrick & Equipment Co.
Foos Gas Engine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
International Supply Co.
Jones, S. M., Co.
Marion Mch. Fuy. & Supply Co.
Miller Improved Gas Engine Co.
National Supply Co.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Titusville Iron Works Co.
Waukesha Motor Co.
Western Machinery Co.

Engines—Gasoline—
Beaver Manufacturing Co.
Buda Co.
Buffalo Gasolene Motor Co.
Continental Motors Corp.
Fairbanks-Morse & Co.
Hercules Motor Corp.
International Harvester Co. of America.
Novo Engine Co.
Waukesha Motor Co.
Western Machinery Co.

Engines—Oil—
Bessemer Gas Engine Co.
De La Vergne Machine Co.
Fairbanks-Morse & Co.
Franklin Valveless Engine Co.
International Harvester Co. of America.
Ingersoll-Rand Co.
McIntosh & Seymour Corp.
National Supply Co.
Oil Well Supply Co.
Power Mfg. Co.
Reid,Joseph, Gas Engine Co.
Western Machinery Co.

Engines—Semi-Diesel, Oil—
Chicago Pneumatic Tool Co.

Engines—Steam—
Ajax Iron Works.
Frick-Reid Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.

Evaporators—
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Extinguishers—Fire—
Foamite-Childs Corp.

F

Fabricators for Gasoline Plants and Refineries—
National Gas Products Co.
Stearns-Rogers Mfg. Co.

Filters—Oil—
Burt Mfg. Co.

Fishing Tools (See Drilling and Fishing Tools)—

Fittings—Dropped Forged Steel—
Vogt, Henry, Machine Co.

Fittings—Forged Steel—
Central Forging Co.

Fittings—Malleable & Cast Iron—
Bovaird Supply Co.
Crane Co.
Frick-Reid Supply Co.
Walworth Mfg. Co.

Fittings—Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.
Gaso Pump & Burner Mfg. Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Kennedy Valve Mfg. Co.
Metric Metal Works.
Oil Well Supply Co.
Reading Steel Casting Co.
Republic Supply Co.
United Iron Works, Inc.
Victaulic Co. of America.

Fittings—Steel—
Dayton Pipe Coupling Co.
Kerotest Mfg. Co.
Ohio Steel Foundry Co.

Flanges—Brass, Iron and Steel—
Jefferson Union Co.
Metric Metal Works.

Flange Unions—
Gaso Pump & Burner Mfg. Co.

Flashlights—
National Carbon Co.

Floating Roofs and Decks—
Chicago Bridge & Iron Works.

Floodlights—
Pyle-National Co.

Forging Billets—
Andrews Steel Co.
Harrisburg Pipe & Pipe Bending Co.
Heppenstall Forge & Knife Co.

Forgings—
Champion Machine & Forging Co.

Friction Clutch Pulleys (See Pulleys)—

Fuel Oil (See Oil —Fuel)—

Fuller's Earth—
Sinclair Refining Co.

G

Gas Compressors (See Compressors—Gas)—

Gas Engines (See Engines—Gas)

Gas Holders—
Chicago Bridge & Iron Works.

Gaskets—
Garlock Packing Co.
McCord Radiator & Mfg. Co.

Gaskets—Fibre—
Durabla Mfg. Co.

Gas Masks & Safety Appliances—
Mine Safety Appliance Co.

Gas Meters (See Meters)—

Gas Oil (See Oil—Gas)—

Gasoline—
Berry's, James B., Sons Co.
Crown Central Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.

Gasoline—Natural—
Chestnut & Smith Corp.
National Gas Products Co.
Skelly Oil Co.
Warren Petroleum Co.

Gasoline Plant Equipment—
Bessemer Gas Engine Co.
Clark Brothers Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.
Widdell Engineering Co.

Gas Regulator Casinghead—
Davis, G. M., Regulator Co.
National Gas Products Co.

Gas Scrubbers—
National Gas Products Co.
Newton Process Mfg. Co.

Gauge Glass—High Pressure—
Durabla Mfg. Co.

Gauge Poles—
Marsh Gauge Pole Co.

Gauges—Automatic Tank—
Brooks Engineering Co.

Gauges—Pressure and Vacuum—
Bristol Co.
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gauges—Test—
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gear Driven Pumps (See Pumps)

Gears—Cut—
Nuttall, R. D., & Co.

Gears—Reduction—
Emsco Derrick & Equipment Co.
Nuttall, R. D., & Co.

Gears—Reverse—
Emsco Derrick & Equipment Co.

Generators—
Westinghouse Electric & Mfg. Co.

Generators—Acetylene—
Oxweld Acetylene Co.

Generators—Turbine—
Moon Manufacturing Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Glassware—Chemical for Laboratory Use—
Illinois Glass Co.

Governors—
Equitable Meter & Mfg. Co.
Gardner Governor Co.

Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co.

Grey Iron Castings (See Castings)

H

Hammers—Chipping and Caulking Pneumatic—
Chicago Pneumatic Tool Co.

Hammers—Riveting Pneumatic—
Chicago Pneumatic Tool Co.

Hangers—Iron and Steel—
Continental Supply Co.
Dodge Mfg. Corp.

Hangers—Tubing—
Hercules Tool Co.

Hatches—Gauges and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Heat Exchangers—Fluid—
Braun, C. F., & Co.
Ross Heater & Mfg. Co., Inc.

High Pressure Gate Valves (See Valves)—

Hoists—Pneumatic, Geared and Universal—
Chisholm-Moore Mfg. Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Chisholm-Moore Mfg. Co.
Ford Chain Block Co.
Sullivan Machinery Co.
Wright Mfg. Co.
Yale & Towne Mfg. Co.

Hooks for Rods and Tubing—
B. & A. Specialty Co.
Dunn Mfg. Co.

Hose—
Fenwick-Reddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Oil Suction and Discharge
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.
United States Rubber Co.

Hot Rolled Strip Steel (See Steel)

Hydraulic Jacks (See Jacks)—

Hypochlorite of Lime—
Mathieson Alkali Works, Inc.

I

Injectors—
Penberthy Injector Co.

Insulation Materials—
Celite Products Co.
Johns-Manville, Inc.

Insurance—Fire—
Oil Insurance Association

Insurance—Tornado—
Oil Insurance Association.

Iron—Ingot—
American Rolling Mill Co.

J

Jacks—Hydraulic—
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Mfg. Co. of Texas.
American Wells Works.
Bessemer Gas Engine Co.
Braden Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Norris, W. C.
Spang & Co.

Jars—
Arbon, Paul, & Co.
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

K

Kerosene—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Arco Company, The
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle-Picher Lead Co.

Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle-Picher Lead Co.

Lifting Jacks—(See Jacks)—

Lighting Equipment—
Pyle National Co.
Westinghouse Electric & Mfg. Co.

Liquid Level Controls (See Controllers)—

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricating Oils (See Oils)—

Lubricators—
Ajax Iron Works.
Lunkenheimer Co.

Lubricators—Force Feed—
Manzel Brothers Co.
McCord Radiator & Mfg. Co.

M

Machine Tools—
Ryerson, Jos. T., & Sons, Inc.

Manholes—Tank—
Brooks Engineering Corp.

Manifolds—
Reid, Joseph, Gas Engine Co.

Meters—Gas—
Equitable Meter & Mfg. Co.
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis.

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber—
Goodyear Tire & Rubber Co.

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment
Campbell, J. A.
Cooper, C. & G. Co.
Griscom-Russell Co.
National Gas Products Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Westcott & Greis.

Nitrogen—
Linde Air Products Co.

Nozzles—Spray—
Power Plant Equip Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Field Equipment—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Steel Construction Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Simplex Equipment Co.
Trumble Gas Trap Co.

Oil—Fuel—
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Gas—
Crown Central Petroleum Corp.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Lubricating—
Barnsdall Refining Co.
Berry's James B., Sons Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Pennzoil Co.
Pure Oil Co.
Sinclair Refining Co
Skelly Oil Co.
Texas Company, The

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pennzoil Co.
Pure Oil Co.
Skelly Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S., & Co.
Houston Pump & Supply Co.

Oil Refinery Equipment (See Refinery Equipment)—

Oil Securities (See Securities)—

Oil Suction and Discharge Hose—(See Hose)—

Oil Well Cementing—
Halliburton Oil Well Cementing Co.

Oil Well Screens (See Screens)—

Oil Well Tools—
D & B Pump & Supply Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Meier, E. C., Lubricating Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.
United States Rubber Co.

Packing—
Crane Packing Co.
Durabla Mfg. Co.
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Packing—Metallic—
Crane Packing Co.

Paint Guns—
Binks Spray Equipment Co.

Painting Equipment—Mechanical
Matthews, W. N., Corp.

Paints—
Aluminum Co. of America
American Asphalt Paint Co.
Arco Company, The
Cook Paint & Varnish Co.
Detroit Graphite Co.
Dixon, Joseph, Crucible Co.
Du Pont de Nemours, E. I. & Co., Inc.
Eagle-Picher Lead Co.
Eclipse Paint & Mfg. Co.
Hill Hubbell & Co.
National Lead Co.
Sherwin-Williams Co.
St. Louis Surfacer & Paint Co.

Pipe—Cast Iron—
Greenspon's Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.

Pipe—Lead Chemical and Antimonial—
Eagle-Picher Lead Co.

Pipe—Steel—
Central Tube Co.
Continental Supply Co.
Greenspon's Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Murray Tool & Supply Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T., & Sons, Inc.
South Chester Tube Co.
Spang Chalfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Pipe—Wrought Iron—
Byers, A. M., Co.
Frick-Reid Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
South Chester Tube Co.
Superior Tube Co.

Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Works.
Cox & Sons Co., The
Landis Machine Co.
Ryerson, Jos. T., & Sons., Inc.

Pipe Clamps (See Clamps—Pipe)

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Coatings—
Hill, Hubbell & Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Straightening Machines—
W-K-M Co., Inc.

Pipe Suspension Device—
Stearns-Rogers Mfg. Co.

Pipe Threaders—Power—
Williams Tool Corp.

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works.

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Hard Rubber—
United States Rubber Co.

Piping—Steel & Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.

Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Guiberson Corp.

Plugs—Bottom Water—
Guiberson Corp.

Power Units—Portable (See Engines)—

Pre-Heaters—
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Preservatives—Asphalt—
American Asphalt Paint Co.

Pulleys—Wood, Iron and Steel—
Continental Supply Co.
Dodge Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumpers—Long Stroke—
Farley Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works.
Axelson Machine Co.
Bryson Jackson Pump Mfg. Co., Inc.
D & B Pump & Supply Co.
Farley Machine Co.
Goulds Pumps, Inc.
Jones, S. M., Co.
Myers, F. E., & Bros. Co.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Ratigan, J. P., Co.
Waukesha Motor Co.

Pumping Gear Units—
Nuttall, R. D., & Co.

Pumping Jacks (See Jacks)—

Pumping Powers—
Bessemer Gas Engine Co.
Buda Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Marion Mch., Fdy. & Supply Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Boiler Feed—
Ajax Iron Works.
Byron Jackson Pump Mfg. Co., Inc.
Fairbanks-More & Co.
Gardner Governor Co.
Goulds Pumps, Inc.
Oil Well Supply Co.

Pumps—Centrifugal—
American Well Works.
Byron Jackson Pump Mfg. Co. Inc.
Dean Hill Pump Co.
Fairbanks-Morse & Co.
Goulds Pumps, Inc.
Worthington Pump & Machinery Corp.

Pumps—Direct Driven—
Bessemer Gas Engine Co.

Pumps—Electric—
Prescott Co.

Pumps—Fuel Oil Service—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.

Pumps—Fuel Oil Transfer—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.

Pumps—Gasoline and Oil for Filling Stations—
Gilbert & Barker Mfg. Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.

Pumps—Hot Oil—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Goulds Pumps, Inc.

Pumps—Pipe Line—
Byron Jackson Pump Mfg. Co., Inc.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Power—
Dean Brothers Co.
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Novo Engine Co.
Prescott Co.
Waukesha Motor Co.

Pumps—Refinery—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Dean Hill Pump Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.

Pumps—Rotary—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Dean Brothers Co.
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.

Pumps—Water—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Prescott Co.

Punch—Rotary Belt—
Victor Balata & Textile Belting Co.

Purifiers—Oil Absorption—
Sharpless Specialty Co.

Pyrometers—
Brown Instrument Co.
Republic Flow Meters Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Ratchet Reamers—
Nye Tool & Machine Works.

Ratchet Stocks and Dies—
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Equitable Meter & Mfg. Co.
Metric Valve Works.

Refinery Equipment—
American Radiator Co.
Blaw-Knox Co.
Braun, C. F., & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works.
Cross Engineering Co.
Graver Corp.
Griscom-Russell Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Appliance Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Reid, Joseph, Gas Engine Co.
Ross Heater & Mfg. Co., Inc.
Ross-Meehan Foundries.
Smith, A. O., Corp.
Smith Separator Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine, Co.
Walsh & Weidner Boiler Co.
Westcott & Greis.
Widdell Engineering Co.

Refractories—Furnace, Stills and Baffles—
Botfield Refractories Co.
National Gas Products Co.

Refrigerating Machinery—
Carbondale Machine Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Regulators—
Fisher Governor Co., Inc.
Gilfillan Machine Works.
Smith Separator Co.

Regulators—Gas—
Chaplin-Fulton Mfg. Co.
Davis, G. M., Regulator Co.
Equitable Meter & Mfg. Co.
Fisher Governor Co.
Metric Metal Works.
National Gas Products Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons—
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

Rod Guides—
Meier, E. C., Lubricating Co.

Rods—Polish—
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M., Co.
Sheffield Steel Corp.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Sheffield Steel Corp.

Rods—Valve—
Jones, S. M., Co.

Roofing—Asbestos—
Johns-Manville, Inc.

Rope Socket Metal—
Eagle-Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Boviard Supply Co.
Republic Supply Co.

Rope—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Boviard Supply Co.
Bridgeport Machine Co.
Broderick & Bascom Rope Co.
International Supply Co.
Jarecki Mfg. Co.
Leschen, A. & Sons, Rope Co.
Wickwire-Spencer Steel Corp.
Williamsport Wire Rope Co.

Rotary Bit Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Rotary Drilling Equipment—
Emsco Derrick & Equipment Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Lines—Manila—
Ajax Rope Co., Inc.
Plymouth Cordage Co.

Sand Lines—Wire—
Ajax Rope Co., Inc.
Broderick & Bascom Rope Co.
Wickwire-Spencer Steel Corp.

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws Temper—
Burns Tool Co.

Separators—Centrifugal—
Miller, Max B., & Co.
Sharpless Specialty Co.
Volz Engineering Equipment Co.

Separators—Gas and Oil—
Smith Separator Co.

Sheet Lead—Chemical and Antinominal—
Eagle-Picher Lead Co.

Sheets—Corrugated, Black and Galvanized—
American Sheet & Tin Plate Co.
Ryerson, Jos. T., & Son, Inc.
United Alloy Steel Corp.

Sheets—Steel—
American Sheet & Tin Plate Co.
Republic Iron & Steel Co.
Sheffield Steel Corp.
United Alloy Steel Corp.

Shingles—Asbestos—
Johns-Mansville, Inc.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Slush Pump Pistons (See Pistons)—

Slush Pumps (See Pumps)—

Smoke Stacks—
Donovan Boiler Works.

Snuffers—Fire—
Simplex Equipment Co.

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Sockets—Sucker Rod—
Guiberson Corp.

Sockets—Swivel—
Arbon, Paul, & Co.

Sockets—Wire Rope—
Chicago Steel Foundry Co.

Soda Ash—
Mathieson Alkali Works, Inc.

Soda—Caustic—
Mathieson Alkali Works, Inc.

Solders—Bar and Wire—
Eagle-Picher Lead Co.
Hoyt Metal Co.

Spark Plugs—
Mosler Metal Products Corp.

Spears—
Acme Fishing Tool Co.
Brown Tool Co., Inc.

Special Steel (See Steel Special)—

Split Sleeves (See Sleeves)—

Sprockets—Power Transmission—
Ajax Iron Works.
Chain Belt Co.

Stands—Vice—
Nye Tool & Machine Works.

Stationary Pipe Threading Die Heads (See Die Heads)—

Steel—All Kinds—
Ryerson, Jos. T., & Son, Inc.

Steel—Alloy—
Central Steel Co.
Timken Roller Bearing Co.
United Alloy Steel Corp.

Steel—Bit—
Central Steel Co.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Andrews Steel Co.
Central Steel Co.
United Alloy Steel Corp.

Steel Band Wheels (See Band Wheels—Steel)—

Steel Bridges (See Bridges)—

Steel Bull Wheels (See Bull Wheels—Steel)—

Steel Castings (See Castings)—

Steel Couplings for Casting, Line Pipe, Drill Pipe and Tubing (See Couplings)—

Steel Crown Blocks (See Crown Blocks)—

Steel Derricks (See Derricks)—

Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.

Steel Fittings (See Fittings)—

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Steel Plate Construction—
Chicago Bridge & Iron Works.
Graver Corp.
Kaw Steel Construction Co.
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.

Steel Sheets (See Sheets, Steel)—

Steel Valves (See Valves, Steel)—

Steel Walking Beams (See Walking Beams—Steel)—

Steel Wheels and Tug Rims—
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works.
Graver Corp.
Kaw Steel Construction Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Smith, A. O., Corp.
Vogt, Henry, Machine Co.
Widdell Engineering Co.

Stocks and Dies—
Borden Co.
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Structural Steel Fabricators (See Steel Fabricators)—

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sucker Rods (See Rods—Sucker)

Suction Pumps (See Pumps)—

Sulphuric Acid—
Eagle-Picher Lead Co.

Superheaters—Steam—
Power Plant Equipment Co.

Swabs—
Arbon, Paul, & Co.
Burt Corporation.
Guiberson Corp.
Simplex Equipment Co.

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Line Equipment—
Brooks Engineering Corp.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tank Equipment—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Tanks—Bolted—
Butler Mfg. Co.
Columbian Steel Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Butler Mfg. Co.
Graver Corp.

Tanks—Cylindrical—
Petroleum Iron Works Co.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works.

Tanks—Field Storage—
American Car & Foundry Co.
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Graver Corp.
Kaw Steel Construction Co.
Maloney Tank Mfg. Co.

Tanks—Run Down—
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Newton Process Mfg. Co.

Tanks—Truck—
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.

Tanks—Underground—
Butler Mfg. Co.
Gilbert & Barker Mfg. Co.
Graver Corp.
Kewanee Boiler Co.
Pittsburgh-Des Moines Steel Co.

Tanks—Welded—
Chicago Bridge & Iron Works.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
States Engineering Co.

Temper Screws (See Screws)—

Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Taylor Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Cox & Sons Co., The.
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tightener—Belt—
Victor Balata & Textile Belting Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly-Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing—
Dunn Mfg. Co.
Guiberson Corp.

Tongs—Chain Pipe—
Armstrong Bros. Tool Co.
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Rotary—
Dunn Mfg. Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tongs—Tubing—
Dunn Mfg. Co.

Tool Chests—Pipe—
Nye Tool & Machine Works.

Tool Joints—
Bridgeport Machine Co.
Federal Supply Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Regan Forge & Engineering Co.

Torches—
Oxweld Acetylene Co.

Tractor Oil (See Oil—Tractor)—

Tractors—
Cleveland Tractor Co.
International Harvester Co. of America.

Trailers—
Spencer Trailer Co.

Transmission Belt—Rubber—
Goodrich, B. F. Rubber Co.
United States Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Mfg. Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
Ford Motor Co.
General Motors Truck Co.
Graham Brothers.
International Harvester Co. of America.
White Co.

Tubes—Boiler, Charcoal Iron—
Byers, A. M., Co.
Reading Iron Co.

Tubes—Boiler Steel—
Continental Supply Co.
National Tube Co.
Ryerson, Jos. T., & Sons, Inc.

Tubing—
Babcock & Wilcox Tube Co.
Byers, A. M., Co.
Central Tube Co.
Continental Supply Co.
National Tube Co.
Reading Iron Co.
South Chester Tube Co.
Spang, Chelfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Tubing Catchers—
Continental Supply Co..
Dunn Mfg. Co.
Guiberson Corp.

Tubing Protectors (See Rod Guides)—

Tubular Goods—
Central Tube Co.
Continental Supply Co.
Oil Well Supply Co.
Republic Iron & Steel Co.
Spang, Chelfant & Co., Inc.
Wheeling Steel Corp.

Tubular Goods—Wrought Iron—
Byers, A. M., Co.
Reading Iron Co.

Turbines for Lighting Equipment
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

U

Underground Tanks (See Tanks)

Underreamer Body Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Brown Tool Co., Inc.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Central Forging Co.
Jefferson Union Co.

V

Valuations—
American Appraisal Co.

Valves—Balata—
Victor Balata & Textile Belting Co.

Valves—Blow-Off—
Homestead Valve Mfg. Co.

Valves—Brass and Bronze—
Homestead Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Mfg. Co.

Valves—Cast Steel—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.
Lunkenheimer Co.

Valves—Drop Forged Steel—
Edwards Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Crane Co.
Darling Valve & Mfg. Co.
Kennedy Valve Mfg. Co.
Kerotest Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Murray Tool & Supply Co.
Powell, Wm., Co.

Valves—Iron—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.

Valves—Metal Pump—
Durabla Mfg. Co.

Valves—Pump—
United States Rubber Co.

Valves—Relief—Supersensitive—
Davis, G. M., Regulator Co.

Valves—Steel—
Chapman Valve Mfg. Co.
Edward Valve Mfg. Co.
Kerotest Mfg. Co.
Lunkenheimer Co.
Metric Metal Works.
Powell, Wm., Co.
Reading Steel Casting Co.

Valves—Tank Vent—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Atlas Ball Co.
Axelson Machine Co.
D & B Pump & Supply Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Varnishes—
Arco Company, The.
Detroit Graphite Co.
Sherwin-Williams Co.

Ventilators—Rotary—
Swartwout Co.

Vises—Bench—
Nye Tool & Machine Works.

Vises—Pipe—
Nye Tool & Machine Works.

Vises—Post—
Nye Tool & Machine Works.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems—
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Wilson Welder & Metals Co.

Well Shooting—
Eastern Torpedo Co.
Zero Hour Torpedo Co.

Wheels—Pipe Cutter—
Nye Tool & Machine Works.

Wheels—Steel Automotive—
Budd Wheel Co.

Winches—
Braden Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D & B Pump & Supply Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works.

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Mfg. Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works.

Z

Zinc Oxide—
Eagle-Picher Lead Co.

XUM

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for April

Runs

	Month	Daily Av.
*Prairie Pipe Line Co.	3,840,000	128,000
Gulf Pipe Line Co.	1,041,263	34,709
Texas Pipe Line Co.	457,001	15,233
Magnolia Petroleum Co.	1,285,967	42,866
Empire Pipe Line Co.	723,420	24,114
Cosden Pipe Line Co.	874,805	29,160
Sinclair Pipe Line Co.	1,653,840	55,128
*Other lines	7,920,000	264,000
Total April	17,796,296	593,210
Total March	17,668,564	569,953
Difference	127,732	23,257

Shipments

†Prairie Pipe Line Co.	4,332,972	144,432
Gulf Pipe Line Co.	1,086,188	36,206
Texas Pipe Line Co.	787,526	26,251
Magnolia Petroleum Co.	1,504,766	50,159
Empire Pipe Line Co.	736,064	24,535
Cosden Pipe Line Co.	881,084	29,369
†Sinclair Pipe Line Co.	2,569,897	85,656
*Other lines	8,820,000	294,000
Total April	20,718,297	690,608
Total March	20,540,959	662,617
Difference	177,338	27,991

Stocks

*Prairie Oil & Gas Co.	27,311,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line and Gypsy Oil	6,341,159
The Texas Company	3,608,827
Magnolia Petroleum Co.	4,939,729
Empire Pipe Line Co.	2,802,158
Cosden Pipe Line Co.	1,941,248
*Sinclair Crude Oil Purchasing Co.	20,200,000
Carter Oil Co.	13,672,648
*Other lines	9,800,000
Total April	92,616,769
Total March	94,761,334
Difference	2,144,565

*Estimated. †Prairie shipments include Texas crude oil. Sinclair shipments include Texas and Wyoming crude oil.

Note: Stocks do not include 5,900,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar., '26	Apr., '26
Nat. Transit	152,572.73	175,931.37
S. W. Pa. P. L.	92,161.74	89,773.16
Eureka P. L.	373,065.58	372,871.02
Buckeye P. L. (Macksburg)	327,422.18	304,514.55
Buckeye P. L. (Cleveland)	11,923.54	12,060.87
Buckeye P. L. (Lima, etc.)	135,330.32	127,204.85
Indiana P. L.	10,428.03	9,095.76
Cumberland P. L.	284,867.52	273,842.36
N. Y. Transit	18,958.88	20,181.07
Tidewater P. L.	154,702.25	160,027.79
Pure Oil Co.	178,024.39	171,766.80
Emery P. L.	51,169.64	48,703.74
Indiana Ref.	86,931.73	93,143.14
Paragon Dev.	26,590.23	24,723.50
Pittsburgh P. L.	6,801.52	6,733.43
Total	1,910,950.33	1,890,573.41
Daily average	61,643.56	63,019.11

Note: Indian Refining Co. also reported other receipts of 301,677.79 bbls. Paragon Refining Co. had other receipts of 159,041.18 bbls. Paragon Development had other receipts of 2,227.34 bbls. Pure Oil had other receipts of 64,473.26 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar., '26	Apr., '26
Nat. Transit	285,116.90	314,763.21
S. W. Pa. Pipe	389,473.31	409,564.75
Eureka P. L.	188,567.14	163,392.74
Buckeye P. L. (Macksburg)	130,098.28	94,254.91
Buckeye P. L. (Cleveland)	1,364.43	1,162.42
Buckeye P. L. (Lima, etc.)	744,048.97	823,641.06
Indiana P. L.	995,973.29	963,616.70
Cumberland P. L.	151,179.06	162,112.44
N. Y. Transit	579,234.50	665,407.25
Northern P. L.	130,218.72	133,960.98
Tidewater P. L.	174,944.54	93,030.34
Pure Oil Co.	217,525.82	205,777.75
Emery P. L.	48,128.83	45,829.05
Paragon Ref.	159,926.73	170,282.16
Indian Ref.	420,774.92	288,296.97
Paragon Dev.	33,731.97	26,494.22
Pittsburgh P. L.	7,088.04	6,539.32
Total	4,657,395.45	4,571,126.27
Daily average	150,238.56	152,370.87

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of March and April, were as follows:

	Mar., '26	Apr., '26
Nat. Transit	1,040,222.33	1,069,233.29
S. W. Pa. P. L.	690,133.67	688,704.11
Eureka P. L.	1,497,216.56	1,621,601.25
Buckeye P. L. (Macksburg)	351,943.86	417,370.13
Buckeye P. L. (Cleveland)	52,018.53	73,536.91
Buckeye P. L. (Lima, etc.)	2,301,324.72	2,369,543.33
Indiana P. L.	558,421.46	544,568.51
Cumberland P. L.	593,665.61	599,474.86
Southern P. L.	488,804.68	481,210.52
N. Y. Transit	731,527.82	695,608.61
Northern P. L.	458,451.24	436,138.52
Pure Oil Co.	429,500.88	460,534.48
Emery P. L.	32,243.81	34,514.24
Paragon Ref.	85,108.55	72,985.28
Indian Ref.	123,335.21	231,194.41
Paragon Dev.	4,370.50	4,918.23
Pittsburgh P. L.		4,614.59
Total	9,438,292.43	9,805,851.27
Decrease	141,102.45	*367,558.84

*Increase.

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of March and April, showing the gross stocks of the above fields:

	Mar., '26	Apr., '26
Penna.	3,842,525.79	4,076,568.47
Lima	958,283.05	947,707.33
Kentucky	1,166,146.58	1,163,245.60
Mid-Continent	3,408,098.00	3,459,618.16
Illinois	63,239.01	158,711.71
Total	9,438,292.43	9,805,851.27

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1923	1924	1925	1926
January	75,790	62,638	56,831	55,630
February	71,092	68,023	60,606	60,394
March	76,592	68,721	60,575	61,644
April	75,614	71,058	63,062	63,019
May	77,365	63,942	59,217	.....
June	77,593	63,230	61,270	.....
July	71,879	64,208	62,639	.....
August	76,910	59,942	59,686	.....
September	72,358	69,930	62,510	.....
October	76,256	64,796	60,995	.....
November	70,762	56,282	59,350	.....
December	69,271	55,814	57,974	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1923	1924	1925	1926
January	171,067	145,518	157,889	156,056
February	164,219	148,732	160,863	159,488
March	185,487	147,098	154,591	150,239
April	170,751	147,611	151,429	152,371
May	177,102	134,997	146,995	.....
June	173,598	143,010	149,467	.....
July	168,330	124,187	161,338	.....
August	142,776	123,120	161,730	.....
September	137,266	127,325	156,719	.....
October	134,597	123,170	145,388	.....
November	131,426	124,400	143,582	.....
December	139,909	151,392	150,162	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1924	1925	1926
January	12,907,202	11,353,276	9,859,170
February	11,844,068	11,192,924	9,679,354
March	10,906,753	11,158,297	9,438,292
April	10,922,742	11,062,082	9,805,851
May	11,335,309	11,207,562	.....
June	11,544,204	11,093,796	.....
July	12,062,361	11,067,453	.....
August	12,221,676	10,974,481	.....
September	12,206,836	10,781,753	.....
October	12,664,061	11,086,850	.....
November	12,268,530	11,068,158	.....
December	11,583,680	10,458,445	.....

Franklin Pipe Line Co.

The following table exhbits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts	Shipmts.	Stocks
1925—			
April	3,040.41	1,780.11	13,159.94
May	2,814.99	5,719.90	10,254.13
June	3,052.75	1,221.83	12,085.05
July	2,639.34	3,174.10	11,550.29
August	3,216.97	1,577.99	13,189.27
September	2,929.99	5,352.05	10,767.21
October	2,869.75	1,499.34	12,137.62
November	2,759.66	2,571.32	12,283.40
December	2,661.87	3,441.67	11,503.60
1926—			
January	2,990.16	1,478.35	13,015.41
February	2,580.23	2,776.19	12,819.45
March	2,754.62	1,732.77	13,841.30
April	3,137.40	4,519.68	12,459.02

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, May 1	2,740,384.77
Runs from wells	581,315.39
Other receipts	399,373.14
Regular deliveries	464,734.35
Other deliveries	523,336.86

The amount of Illinois oil run by the Tidewater Pipe Co. in April was 39,641.65 bbls. and deliveries were 22,869.65 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1925—		
May	692,671.94	568,573.62
June	700,090.46	589,535.34
July	724,481.26	564,713.19
August	673,652.38	650,649.97
September	706,434.87	510,657.61
October	706,532.00	633,682.32
November	664,556.30	488,449.19
December	665,086.99	578,938.47
1926—		
January	665,243.62	516,083.76
February	632,611.99	506,310.51
March	753,300.74	524,625.95
April	610,957.04	487,604.00

The Tidewater Pipe Co., Ltd., also delivered in April, 75,798.73 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
January	9,355	13,484	32,581	19,387	5,097	79,804	.....	.....	.....	65	65	79,869
February	13,111	9,464	28,214	24,393	20,107	95,289	.....	.....	.....	.....	.....	95,289
March	7,000	2,516	48,839	16,612	16,903	91,870	.....	.....	.....	.....	.....	91,870
April	19,033	5,133	28,333	13,400	22,867	88,767	.....	.....	4,700	.....	.....	93,467

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
January	13,451	19,484	49,451	12,645	21,903	115,934	21,903	25,871	5,645	4,871	58,290	174,224
February	14,643	16,071	60,107	9,464	20,750	121,035	22,321	50,250	6,286	6,714	85,571	206,606
March	28,387	15,935	81,742	16,290	34,258	176,612	19,355	44,097	7,096	5,294	75,842	252,454
April	15,200	14,000	76,833	10,633	39,333	156,000	19,200	24,900	2,000	4,433	50,533	206,533

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
May:	Month	18,820,328	14,443,675	13,077,697	3,493,266	11,813,996	1,886,752	2,799,542	3,167,300	69,502,556
	Daily average	607,107	465,925	421,861	112,686	381,097	60,863	90,308	102,171	2,242,018
June:	Month	19,288,135	13,832,970	12,602,540	3,229,440	9,200,372	1,830,965	2,754,498	3,389,000	66,127,920
	Daily average	642,938	461,099	420,085	107,648	306,672	61,032	91,816	109,000	2,204,264
July:	Month	20,411,049	14,263,565	12,337,598	3,686,675	7,835,819	1,898,178	3,129,199	3,348,000	66,910,083
	Daily average	658,421	460,115	397,984	118,925	252,768	61,231	100,942	108,000	2,158,390
August:	Month	21,005,580	14,441,040	11,936,079	3,558,087	7,450,580	1,858,543	3,250,448	3,177,000	66,677,357
	Daily average	677,599	465,480	385,032	114,777	240,341	56,727	104,853	102,484	2,150,883
September:	Month	20,062,763	14,825,040	11,264,890	3,393,270	6,457,950	1,776,570	3,235,625	3,212,000	64,228,108
	Daily average	668,759	494,168	375,496	113,109	215,265	56,219	107,854	107,067	2,140,937
October:	Month	20,015,076	14,921,199	11,196,511	3,477,146	6,409,281	1,871,830	3,394,990	3,248,000	64,534,033
	Daily average	645,648	481,329	361,178	112,166	206,751	60,382	109,500	104,774	2,081,743
November:	Month	19,095,907	14,590,980	10,650,087	3,221,760	5,927,955	1,758,882	3,088,121	2,992,000	61,325,692
	Daily average	636,530	486,366	355,003	107,397	197,599	58,629	102,937	99,753	2,044,190
December:	Month	19,249,711	14,123,848	10,930,455	3,308,816	6,047,883	1,763,966	3,187,164	3,086,900	61,698,743
	Daily average	620,959	455,608	352,595	106,736	195,093	56,902	102,812	99,552	1,990,282
January:	Month	19,069,563	13,674,813	10,880,814	3,250,536	5,489,620	1,606,952	3,136,280	3,014,000	60,122,578
	Daily average	615,147	441,123	350,994	104,856	177,084	51,835	104,396	97,226	1,939,438
February:	Month	17,163,963	12,387,620	9,689,120	2,877,812	4,756,836	1,583,904	2,769,605	2,931,000	54,159,860
	Daily average	612,999	442,415	346,040	102,779	169,887	56,568	98,914	104,678	1,934,281
March:	Month	18,825,786	14,312,886	10,974,341	3,334,887	5,115,837	1,889,946	3,151,250	3,327,000	60,931,933
	Daily average	607,283	461,706	354,041	107,577	165,027	60,966	101,653	107,323	1,965,546
April:	Month	18,091,771	14,468,190	10,778,760	3,330,120	5,127,510	1,959,570	3,231,404	3,272,000	60,259,325
	Daily average	603,069	482,273	359,292	111,004	170,917	65,319	104,239	109,066	2,008,644
	Total 12 months	231,100,232	170,285,816	136,318,892	40,161,815	81,633,639	21,686,058	37,128,126	38,164,200	756,478,188
	Daily average	633,151	466,536	373,476	110,032	223,654	59,414	101,721	104,559	2,072,543

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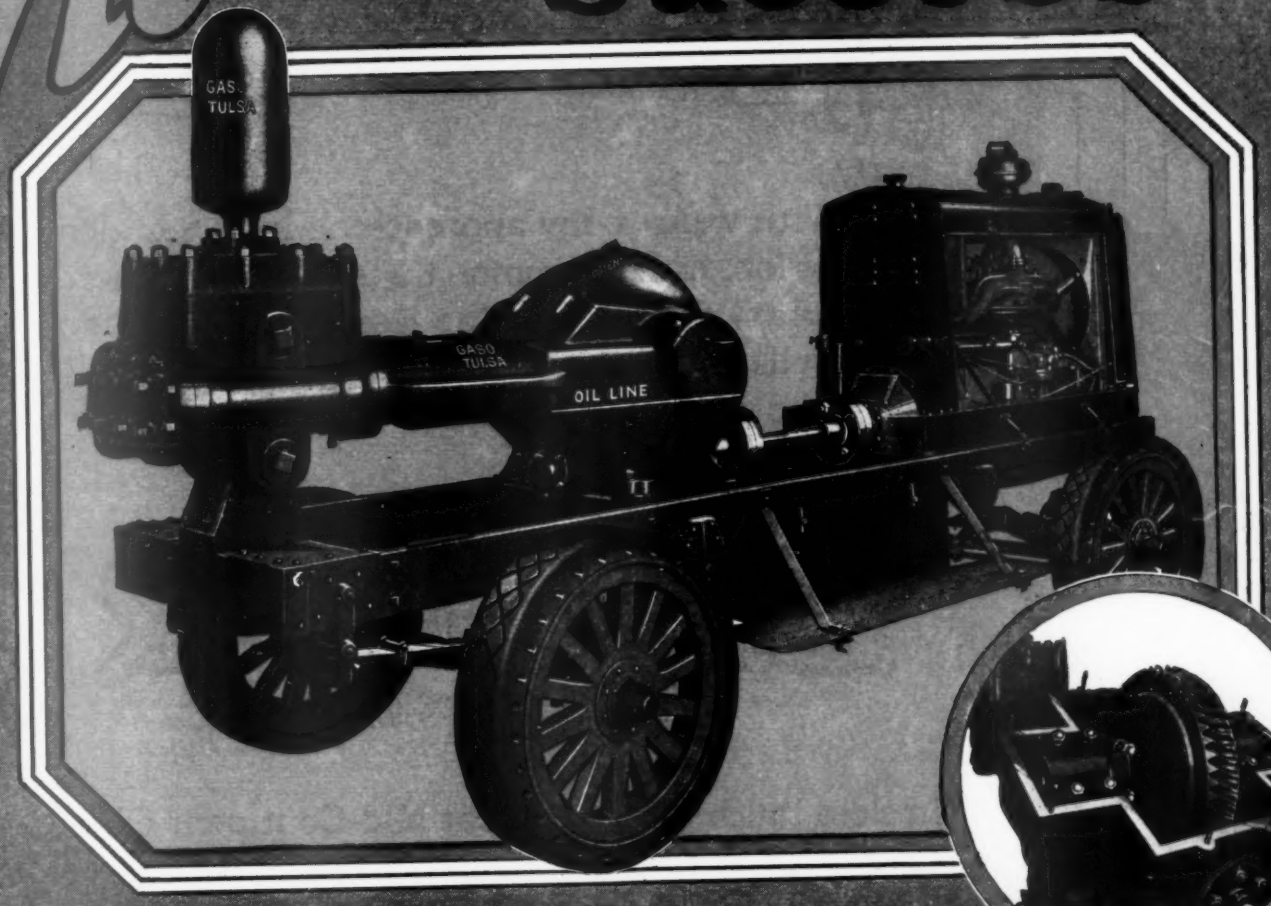
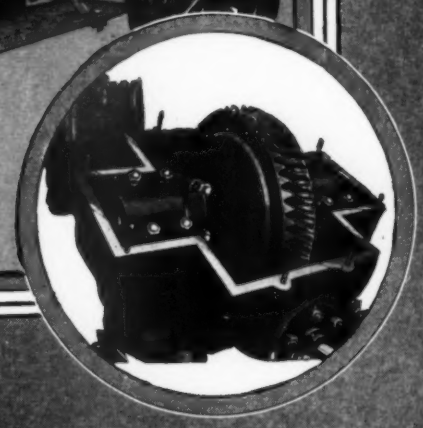
New But an Instant Success





GASO Portable Pumping Plant
With Worm-Driven Self-Lubricating Pump

Just the thing for "Pick-Ups" in Pipe Line Breaks—Temporary or Semi-Permanent Pump Station and Booster Service—Water Supply in Drilling Operations, etc., etc.

Three hours after this GASO Portable Pumping Plant made its first public appearance [at the 1925 Petroleum Exposition] it was necessary to mark it "Sold." Throughout the show it was a center of interest.

Since October, this latest addition to the GASO family has been severely and thoroughly tested in the field—and found to measure up fully to earlier expectations.

Sturdily built for rough use—self lubricating—worm driven—and equipped with a dependable power unit, it offers a type of pumping plant which the industry has long needed and which GASO is proud to present as its latest achievement. The plant is furnished mounted on either a trailer or on channel iron skids.

Let us send you detailed information.

GASO PUMP & BURNER MFG. COMPANY - *Tulsa, Okla.*

SPECIFICATIONS

PUMP—Duplex double acting, interchangeable cylinder liners from 2½" to 5", 10" stroke. Capacities, from 45 bbls. per hour at 600 lbs. pressure, to 250 bbls. per hour at 275 lbs. pressure. Has bronze ring gear and steel worm, with double thrust ball bearings, all enclosed in housing and running in oil.

POWER UNIT—40 H. P. Buda four-cylinder motor equipped with combination gasoline and natural gas carburetor. Pierce governor.

TRAILER—Standard tread, wooden wheels, 36x5 Cushion Tires. Extra large axles with Timken Roller Bearings. Front axle has regular automobile knuckle joint steering arrangement. Steel tool box. Four 45", 12-leaf Vanadium Steel Springs.

GASO PUMPS
for every oil industry need

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With wells today approaching a mile in depth, no longer can common tools be used for successful oil field work. The loss of otherwise good wells due to poor tools does not worry drillers who use

Heat Treated BRIDGEPORT Field Proven Tools

For years we have been in close touch with the great Mid-Continent Oil Fields, where wildcatting has brought its reward, and by continual improvements we have kept pace with the situation.

Carried in stock at the Bridgeport branches as follows:

WICHITA, KANS.*	WINFIELD, KANS.	DEPEW, OKLA.	GARBER, OKLA.	RANGER, TEX.
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GORHAM, KANS.	STROUD, OKLA.	TONKAWA, OKLA.	PAWNEE, OKLA.*	BRECKENRIDGE, TEX.
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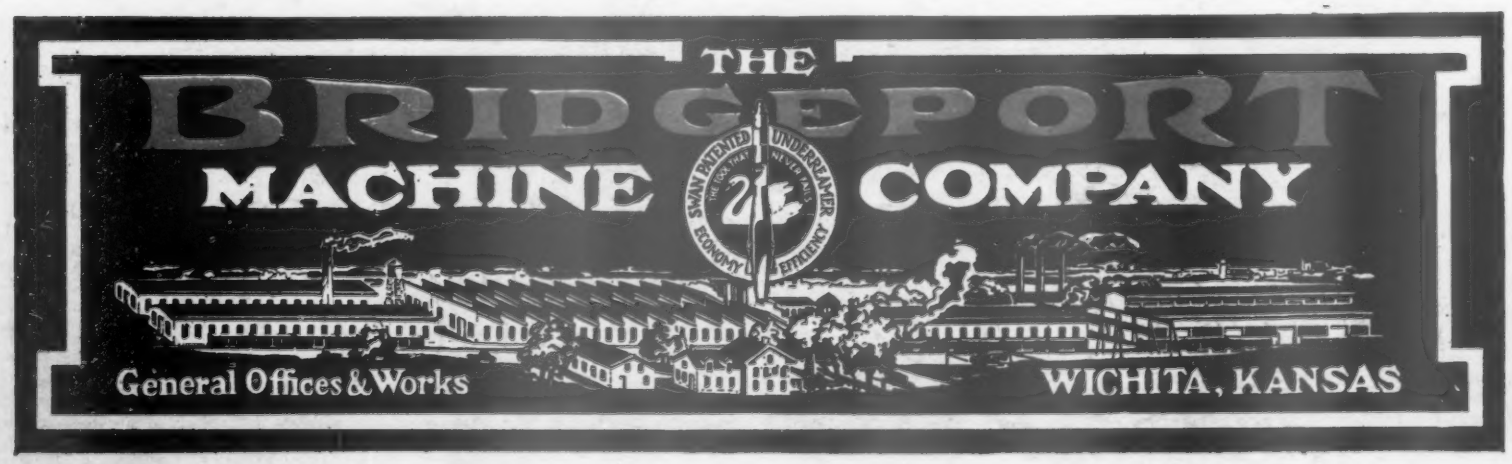
A complete stock of contractors' supplies carried at points indicated by a star.